RB5s/SJB/00003.1

WATER DIVERSION AND DISCHARGE POINTS ALONG THE SAN JOAQUIN RIVER: MENDOTA POOL DAM TO MOSSDALE BRIDGE

Volume 2-A: Appendix A

Detailed Descriptions of Discharge and Diversion Points Along the San Joaquin River from Mendota Dam to Mossdale Bridge at Interstate 5

California Regional Water Quality Control Board
Central Valley Region
3443 Routier Road
Sacramento, CA 95827-3098

April 1989

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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Special acknowledgement goes to those staff who spent countless hours doing the field surveys: Rudy J. Schnagl, John L. Menke, Louis F. Pratt, Christopher Cooper, and Ron R. Thomasson and to Brenda Grewell who prepared all the report graphics. Special thanks goes to the land owners, without whose cooperation this program would not have been possible.

APPENDIX A

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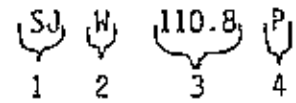
Explanation of the Unique Site Identification Numbers Used Throughout the Report and Appendices



1. The first two letters designate the river

   SJ = San Joaquin River

2. The third letter designates the bank of the river

   W = west bank

   E = east bank

3. The 4-digit number designates the river mileage as described by the U.S. Army Corps of Engineers (1984)

4. The final letter designates the type of site

   P = water diversion

   D = discharge to the river

San Joaquin River Section #1

Mendota Dam to Avenue 7-1/2

SAN JOAQUIN RIVER

Section 1: Mendota Dam to Avenue 7 1/2

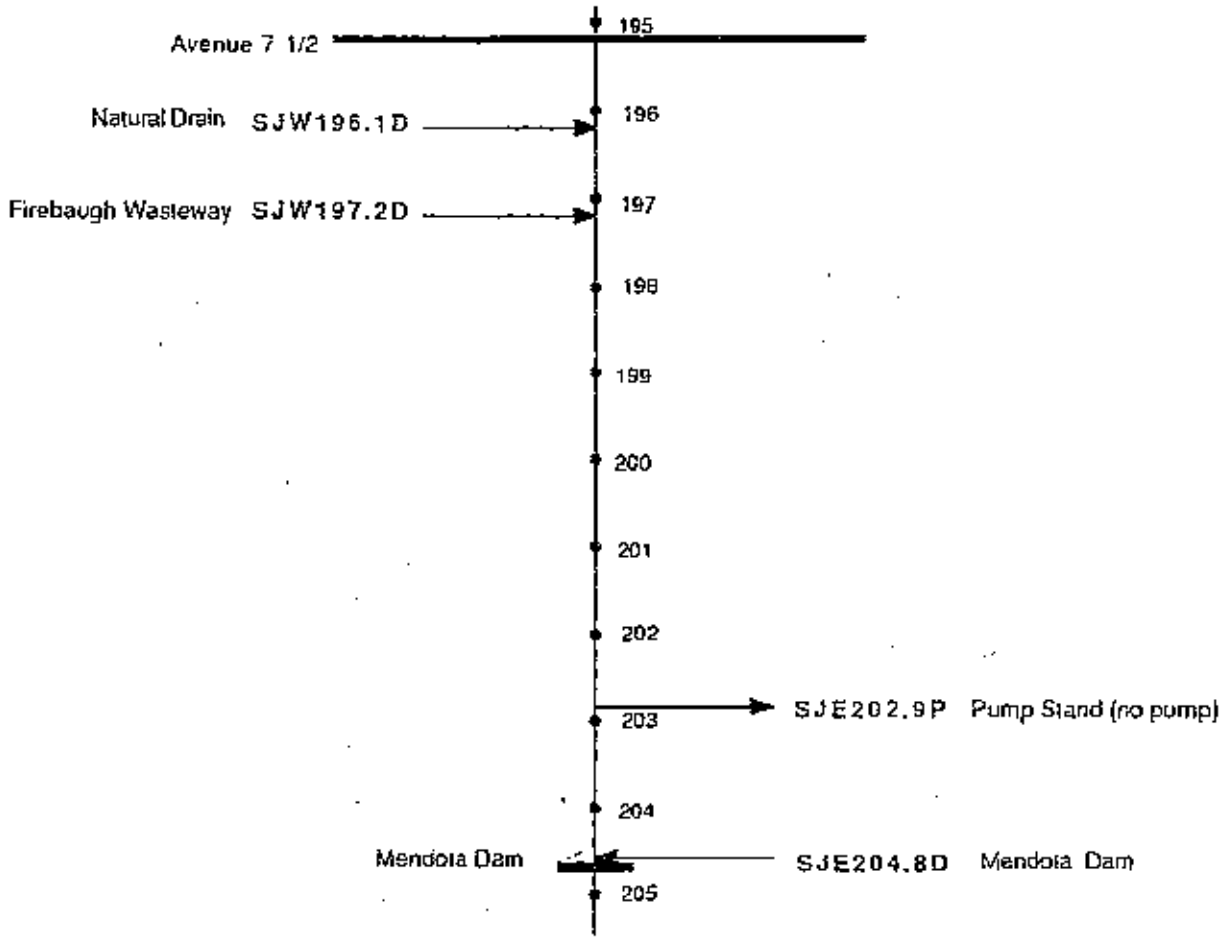


Figure A-1. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Mendota Dam to Avenue 7 1/2 (River Section 1).

San Joaquin River Section #2

Avenue 7-1/2 to Sack Dam

SAN JOAQUIN RIVER

Section 2: Avenue 7 1/2 to Sack Dam

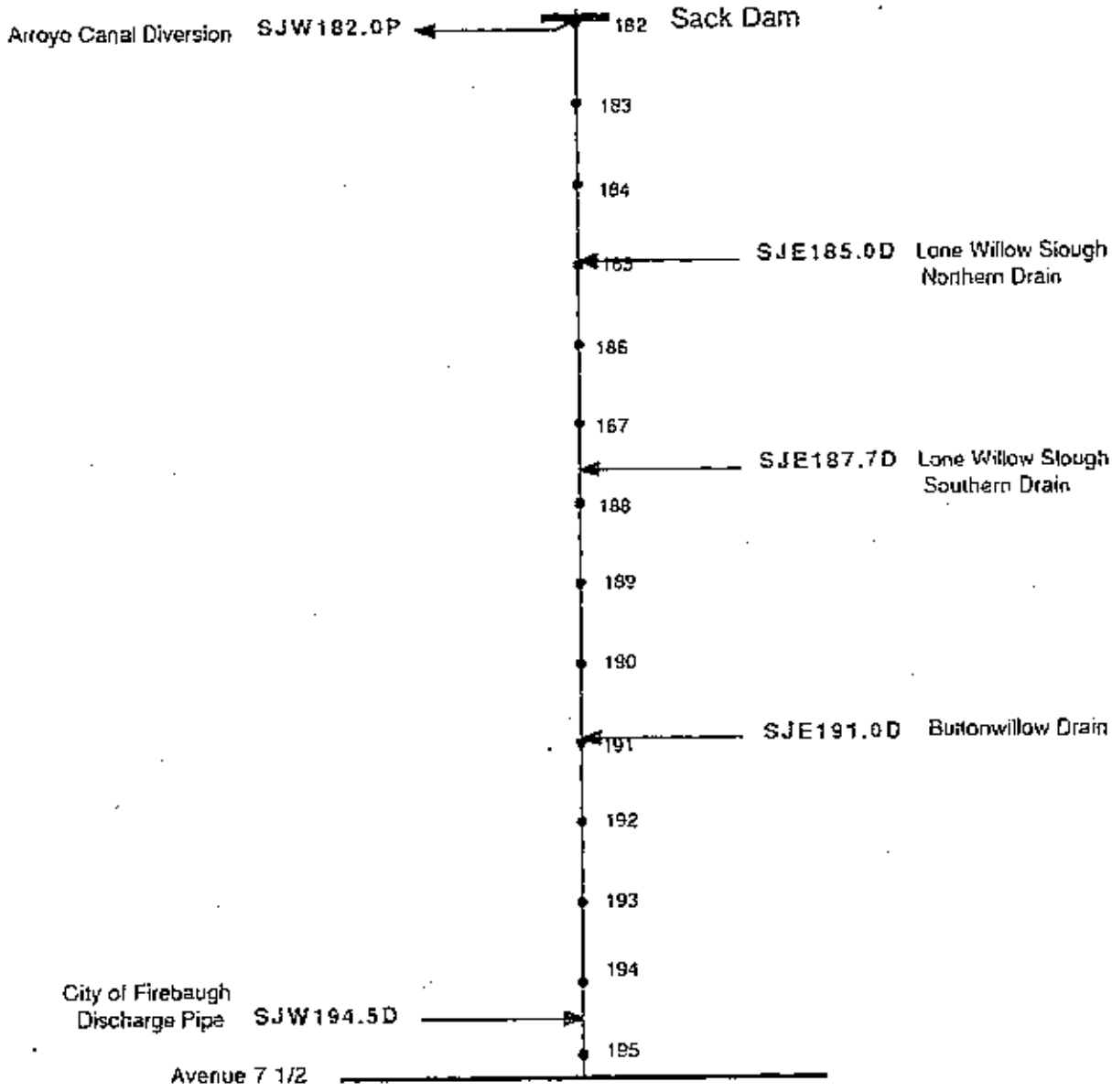


Figure A-2. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Avenue 7 1/2 to Sack Dam (River Section 2).

San Joaquin River Section #3

Sack Dam to Santa Rita Bridge (Highway 152)

SAN JOAQUIN RIVER

Section 3: Sack Dam to Santa Rita Bridge (Hwy. 152)

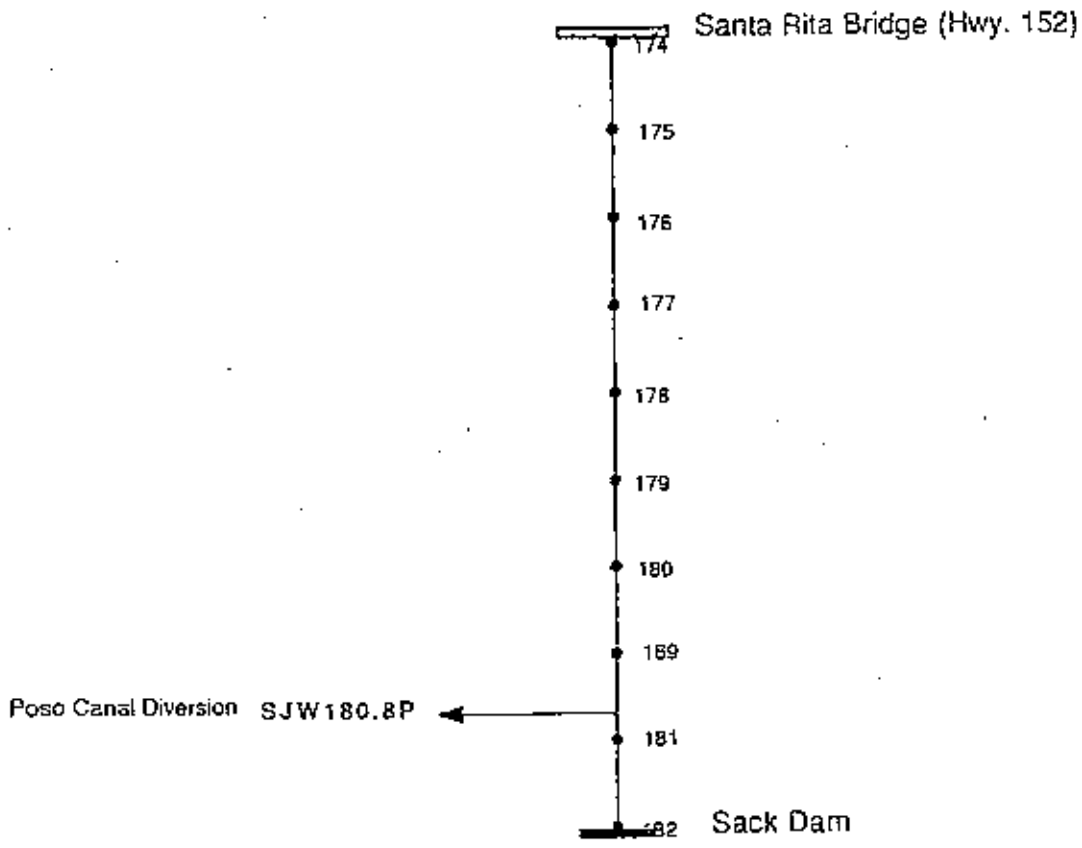


Figure A-3. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Sack Dam to Santa Rita Bridge - Hwy. 152 (River Section 3).

San Joaquin River Section #4

Santa Rita Bridge (Highway 152) to Mariposa Bypass (Intake)

SAN JOAQUIN RIVER

Section 4: Santa Rita Bridge (Hwy. 152) to Mariposa Bypass (Intake)

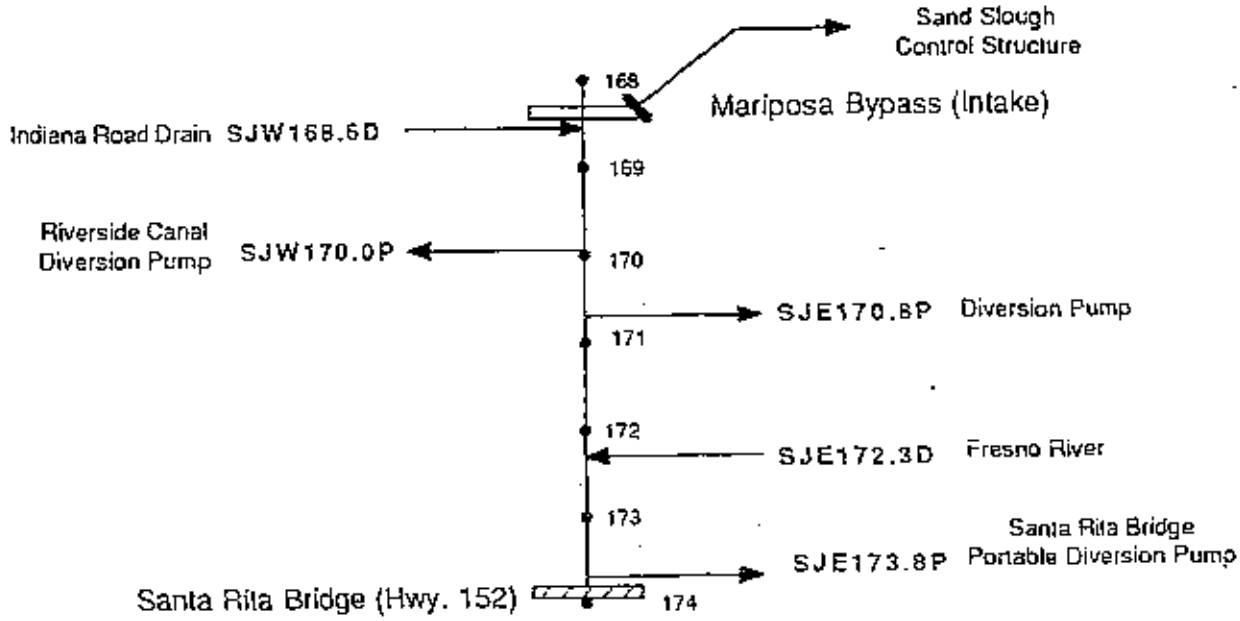


Figure A-4. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Santa Rita Bridge - Hwy. 152 to Mariposa Bypass (Intake) (River Section 4).

San Joaquin River Section #5

Mariposa Bypass (Intake) to Turner Island Road

SAN JOAQUIN RIVER

Section 5: Mariposa Bypass (Intake) to Turner Island Road

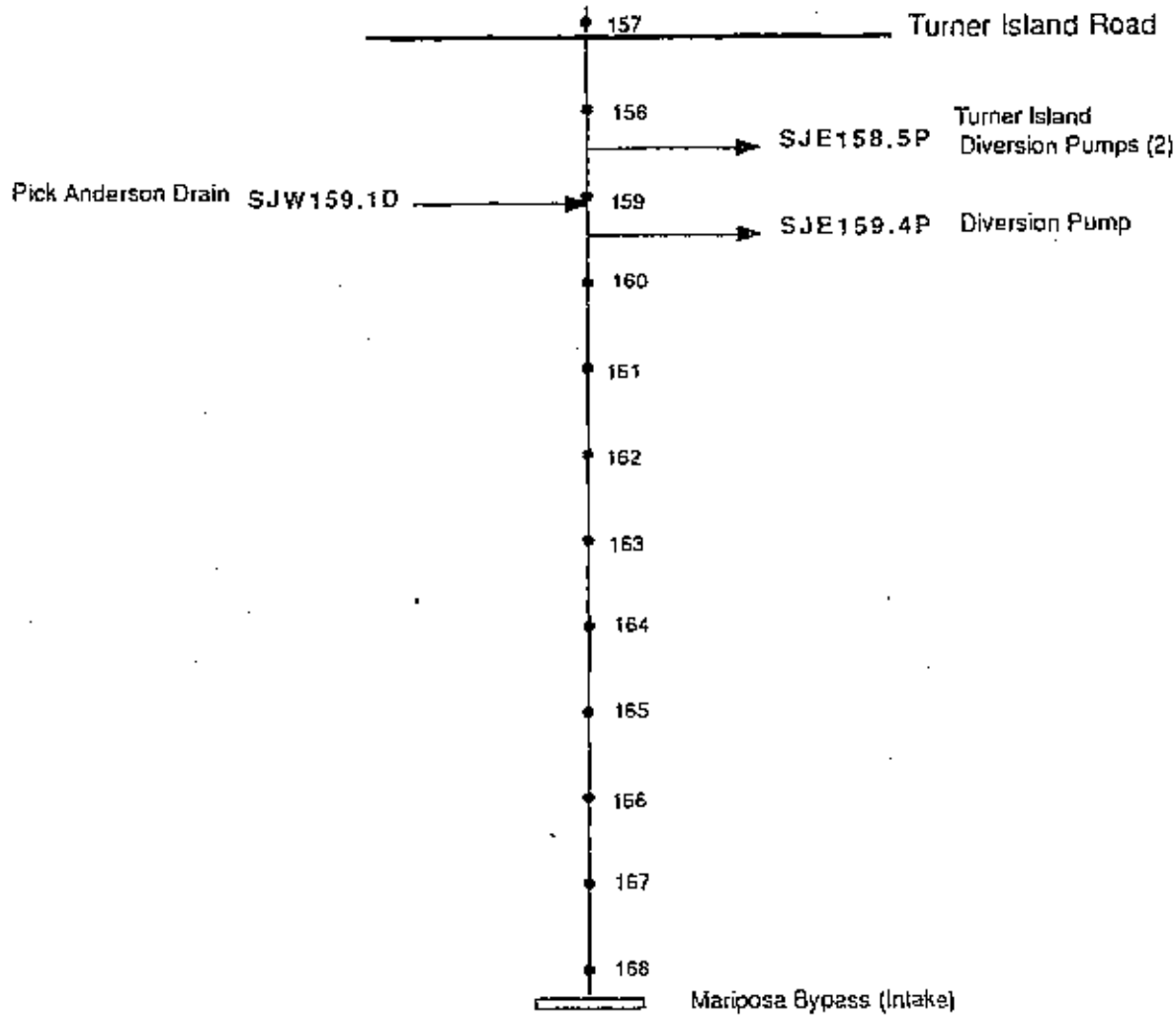


Figure A-5. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Mariposa Bypass (Intake) to Turner Island Road (River Section 5).

San Joaquin River Section #6

Turner Island Road to Mariposa Bypass (Outlet)

SAN JOAQUIN RIVER

Section 6: Turner Island Road to Mariposa Bypass (Outlet)

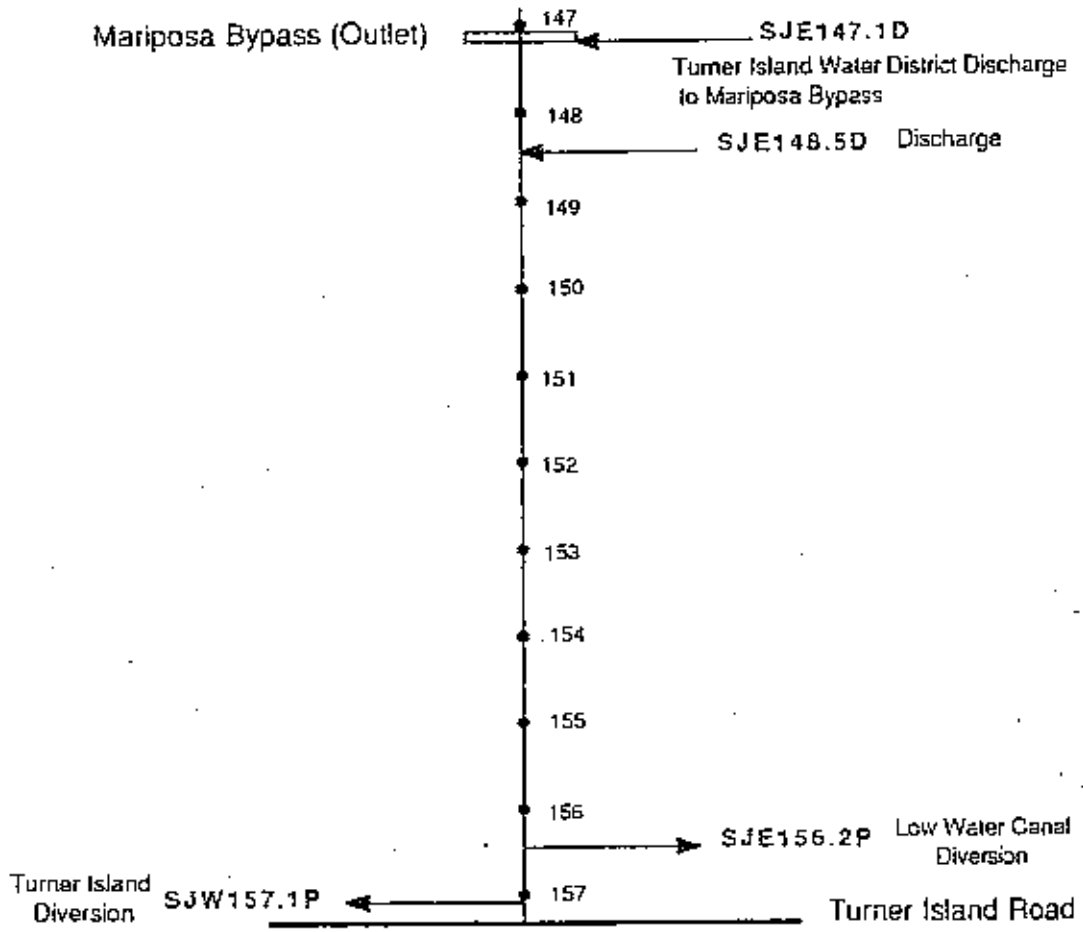


Figure A-6. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Turner Island Road to Mariposa Bypass (Outlet)(River Section 6).

San Joaquin River Section #7

Mariposa Bypass (Outlet) to Bear Creek Inflow

SAN JOAQUIN RIVER

Section 7: Mariposa Bypass (Outlet) to Bear Creek Inflow

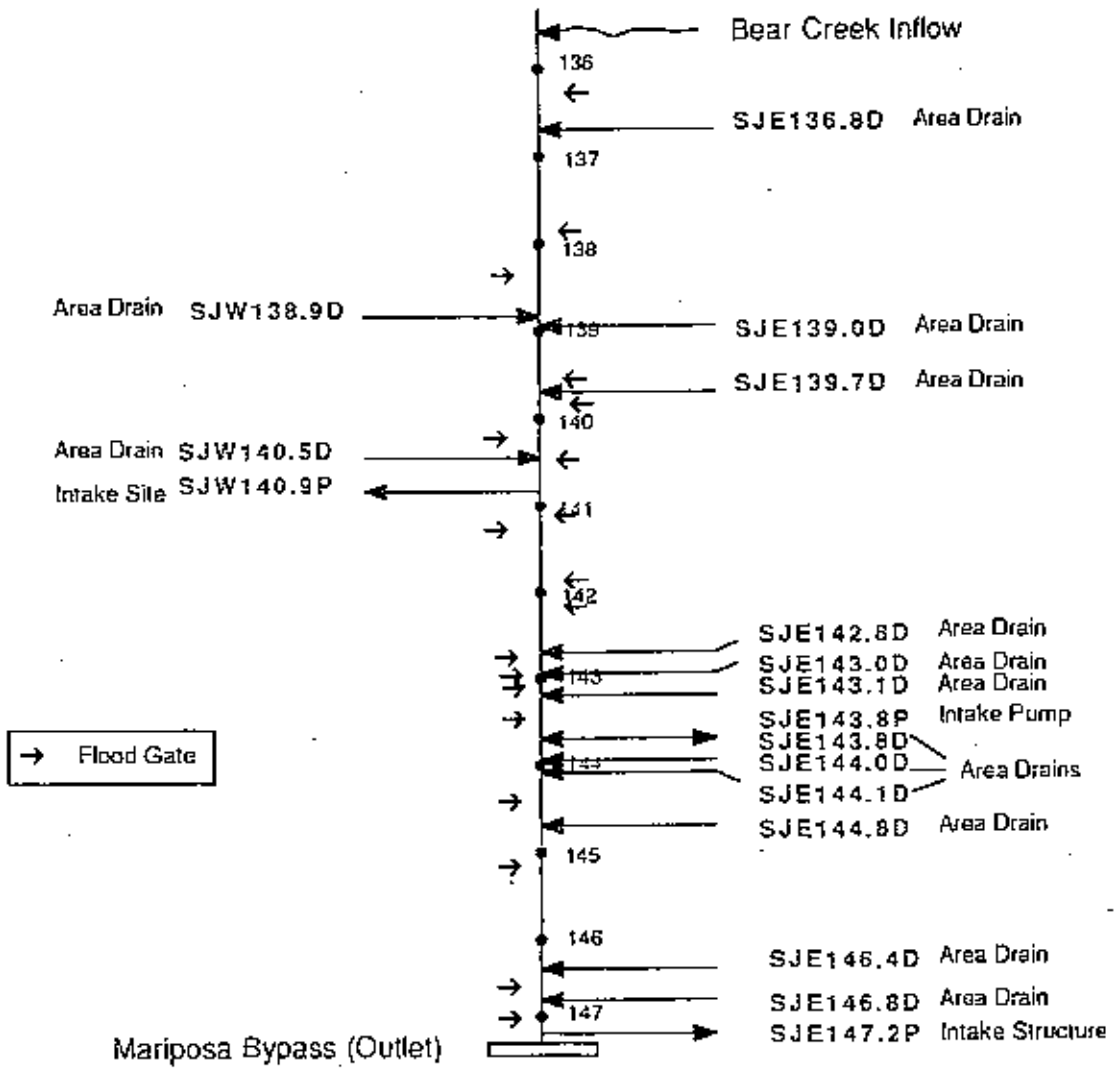


Figure A-7. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Mariposa Bypass (Outlet) to Bear Creek Inflow (River Section 7).

San Joaquin River Section #8

Bear Creek Inflow to Lander Avenue Bridge (Highway 165)

SAN JOAQUIN RIVER

Section 8: Bear Creek Inflow to Lander Avenue Bridge (Hwy. 165)

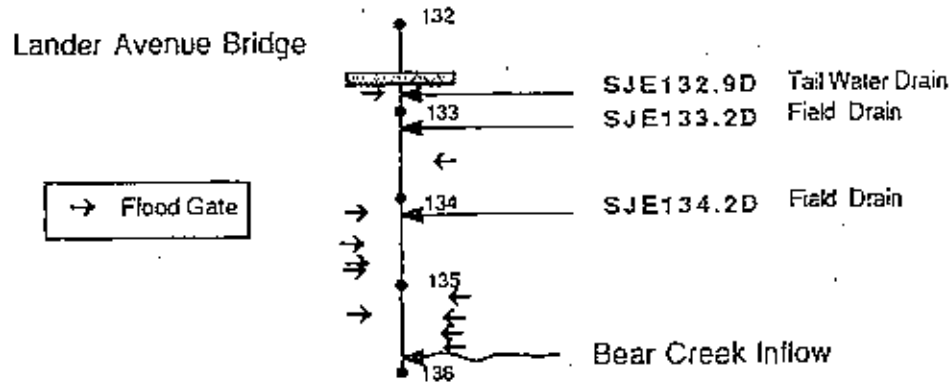


Figure A-8. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Bear Creek Inflow to Lander Avenue Bridge (Hwy.165) (River Section 8).

San Joaquin River Section #9

Lander Avenue Bridge (Highway 165) to Upstream of Salt Slough

SAN JOAQUIN RIVER

Section 9: Lander Avenue Bridge (Hwy. 165) to Upstream of Salt Slough

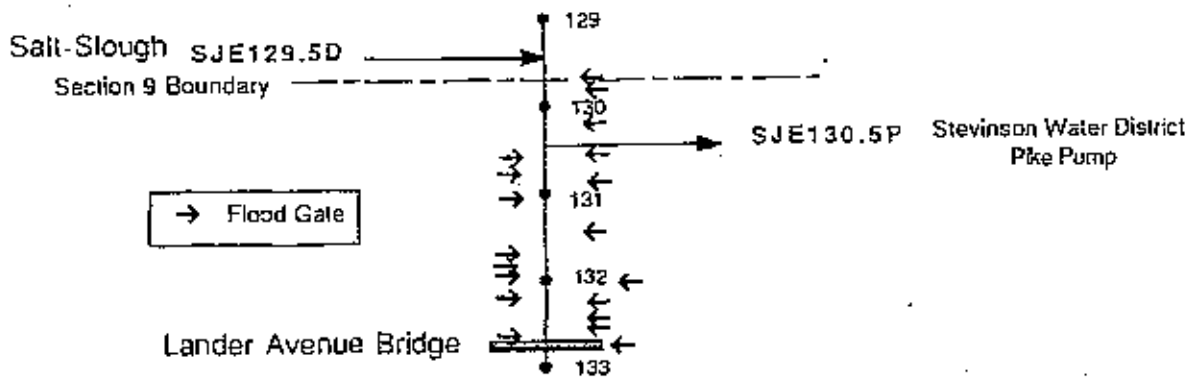


Figure A-9. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Lander Avenue Bridge (Hwy.165) to Upstream of Salt Slough (River Section 9).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 129.5

Site Name: Flood Gates 23E-33E River Mileage: 129.5-132.9

Site description, location and access: There are 11 flood gates on the right (east) bank of the San Joaquin River in this reach. They are designed to discharge surface runoff into the River during and after flood flows. They have the potential to discharge tail water, but staff inspections have not detected extensive use for this purpose. Access to the sites is via the east levee road north of the east levee and Lander Avenue intersection.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced USGS Quad Map: Gustine & Stevinson

WATER SOURCE

Type and source of water being discharged (description): Lower San Joaquin Levee District Unit No. 1 - Right (East) Bank San Joaquin River.

Site#	Miles North of Lander Avenue	Unit No. 1 Levee Mileage	Site Description
23E	2.4	6.65	24-inch CM pipe through the levee, 9.8 feet below the crown. Flap gate on the waterward end.
24E	2.0	6.90	36-inch CM pipe through the levee, 10.3 feet below the crown. Flap gate on the waterward end.
25E	1.8	7.22	24-inch CM pipe through the levee, 5.1 feet below the crown. Flap gate on the waterward end.
26E	1.6	7.46	24-inch CM pipe through the levee, 8.0 feet below the crown. Flap gate on the waterward end.
27E	1.3	7.70	24-inch CM pipe through the levee, 10.0 feet below the crown. Flap gate on the waterward end.
28E	0.9	8.09	24-inch CM pipe through the levee, 8.0 feet below the crown. Flap gate on the waterward end.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 129.5

Site Name: Flood Gates 23E-33E River Mileage: 129.5-132.9

Site description, location and access: There are 11 flood gates on the right (east) bank of the San Joaquin River in this reach. They are designed to discharge surface runoff into the River during and after flood flows. They have the potential to discharge tail water, but staff inspections have not detected extensive use for this purpose. Access to the sites is via the east levee road north of the east levee and Lander Avenue intersection.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced USGS Quad Map: Gustine & Stevinson

WATER SOURCE

Type and source of water being discharged (description): Lower San Joaquin Levee District Unit No. 1 - Right (East) Bank San Joaquin River.

Site#	Miles North of Lander Avenue	Unit No. 1 Levee Mileage	Site Description
23E	2.4	6.65	24-inch CM pipe through the levee, 9.8 feet below the crown. Flap gate on the waterward end.
24E	2.0	6.90	36-inch CM pipe through the levee, 10.3 feet below the crown. Flap gate on the waterward end.
25E	1.8	7.22	24-inch CM pipe through the levee, 5.1 feet below the crown. Flap gate on the waterward end.
26E	1.6	7.46	24-inch CM pipe through the levee, 8.0 feet below the crown. Flap gate on the waterward end.
27E	1.3	7.70	24-inch CM pipe through the levee, 10.0 feet below the crown. Flap gate on the waterward end.
28E	0.9	8.09	24-inch CM pipe through the levee, 8.0 feet below the crown. Flap gate on the waterward end.

Site#	Miles North of Lander Avenue	Unit No. 1 Levee Mileage	Site Description
29E	0.6	8.43	24-inch CM pipe through the levee, 9.5 feet below the crown. Flap gate on the waterward end.
30E	0.4	8.62	24-inch CM pipe through the levee, 9.0 feet below the crown. Flap gate on the waterward end.
31E	0.1	8.95	24-inch CM pipe through the levee, 9.1 feet below the crown. Flap gate on the waterward end.
32E	50 feet	9.01	36-inch CM pipe through the levee, 10.0 feet below the crown. Flap gate on the waterward end.
33E	45 feet	9.01	30-inch concrete drainpipe through the levee, 7.3 feet below the crown. Slide gate on the waterward end. (App. No. 12156 - Merquin Co. Water District).

Comments on factors affecting water quality and quantity at the site: Discharge water should be of good quality as normal rainfall runoff.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 130.5 P

Site Name: Stevinson Water District
Pike Pump

River Mileage: 130.5

Site description, location and access: The pump is located on the east bank of the San Joaquin River and can be accessed via east levee. The pump is 1.7 miles north of Lander Avenue on the east levee. The pump is used to irrigate the landward side of the levee and the water is transported via a 24-inch pipe through the levee, 13.6 feet below the crown. Concrete distribution box on the waterward side. Pump on the riverbank. (App. No. 4425 - Stevinson Corp.)

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 28, T7S, R10E, (DWR# 7S/10E-28F)

Latitude/Longitude: Lat. 37° 17' 53"/Long. 120° 52' 48"

County: Merced

USGS Quad Map: Gustine

Type of diversion and use of the water: The pump has 75 hp. It pumps water from the San Joaquin River to irrigate 500 acres of farm land. Deep wells are occasionally used to supplement water supply. The irrigated farm land alternates in uses between pasture, alfalfa, and corn.

Meter Number: not recorded on field survey

Water Right Permit Number: 4425

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 130.6

Site Name: Flood Gates 1W-8W River Mileage: 130.6-132.9

Site description, location and access: There are eight flood gates on the left (west) bank of the San Joaquin River in this reach. They are designed to discharge surface runoff into the River during and after flood flows. They have the potential to discharge tail water, but staff inspections have not detected extensive use for this purpose. Access to the sites is via the west levee road north of the west levee and Lander Avenue intersection.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced USGS Quad Map: Gustine & Stevinson

WATER SOURCE

Type and source of water being discharged (description): Lower San Joaquin Levee District Unit No. 2 - Left (West) Bank San Joaquin River.

Site#	Miles North of Lander Avenue	Unit No. 2 Levee Mileage	Site Description
01W	2.1	0.24	24-inch CM pipe through the levee, 11.0 feet below the crown. Flap gate on the waterward end.
02W	1.6	0.69	24-inch CM pipe through the levee, 14.8 feet below the crown. Flap gate on the waterward end.
03W	1.3	1.03	24-inch CM pipe through the levee, 8.6 feet below the crown. Flap gate on the waterward end.
04W	1.1	1.23	24-inch CM pipe through the levee, 7.5 feet below the crown. Flap gate on the waterward end.
05W	1.0	1.36	36-inch CM pipe through the levee, 14.6 feet below the crown. Flap gate on the waterward end.
06W	0.7	1.63	24-inch CM pipe through the levee, 10.2 feet below the crown. Flap gate on the waterward end.

Site#	Miles North of Lander Avenue	Unit No. 2 Levee Mileage	Site Description
07W	0.5	1.88	36-inch CM pipe through the levee, 10.7 feet below the crown. Flap gate on the waterward end.
08W	50 feet	2.32	24-inch CM pipe through the levee, 7.0 feet below the crown. Flap gate on the waterward end.
		2.33	Lander Avenue (J14) crosses the levee at crown elevation.

Comments on factors affecting water quality and quantity at the site: Discharge water should be of good quality as normal rainfall runoff.

San Joaquin River Section #10

Salt Slough Inflow to Fremont Ford Bridge (Highway 165)

SAN JOAQUIN RIVER

Section 10: Salt Slough Inflow to Fremont Ford Bridge (Hwy. 140)

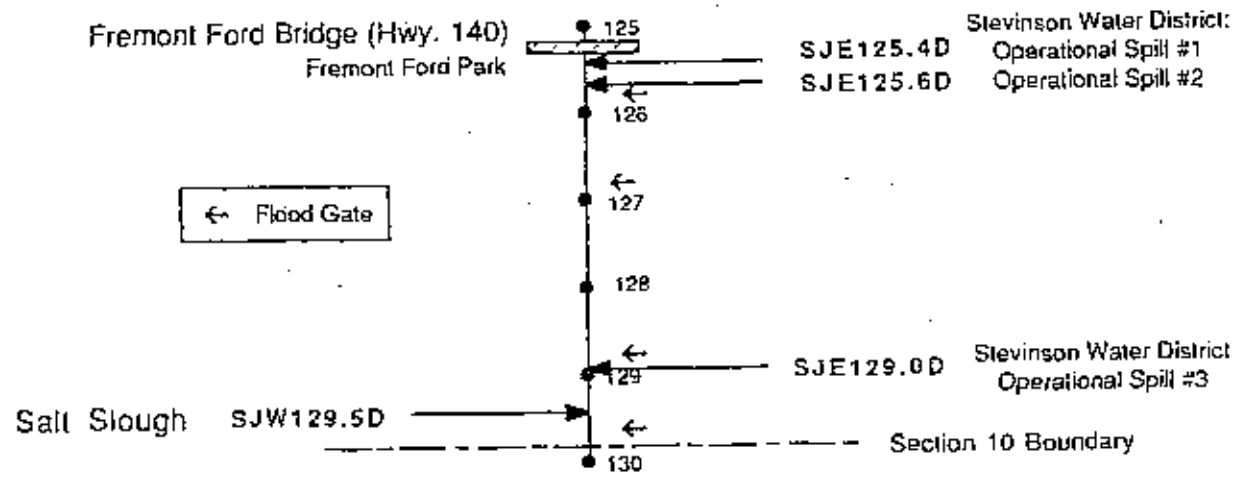


Figure A-10. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Salt Slough Inflow to Fremont Ford Bridge (Hwy.140) (River Section 10).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 125.4D

Site Name: Stevinson Water District Operational Spill #1

River Mileage: 125.4

Site description, location and access: The drain is located 0.2 miles south of Highway 140 on the east levee road and is accessed via the east levee. Water from the landward side of east levee is drained to the river flood plain by a 48-inch CM pipe through the levee, 14.0 feet below the crown. Flap gate on the waterward end.

Township/Range/Section: SW 1/4, NE 1/4, SE 1/4, Section 24, T7S, R9E (DWR# 7S/9E-24J)

Latitude/Longitude: Lat. 37° 18' 27"/Long. 120° 55' 28"

County: Merced

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Irrigation tail water from irrigated lands on the west side of the river.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 125.6D

Site Name: Stevinson Water District Operational Spill #2

River Mileage: 125.6

Site description, location and access: The drain is located 0.3 miles south of Highway 140 on the east levee road and is accessed via the east levee. Water from the landward side of east levee is drained to the river flood plain by a 24-inch CM pipe through the levee, 11.9 feet below the crown. Flap gate on the waterward end.

Township/Range/Section: NE 1/4, SE 1/4, SE 1/4, Section 24, T7S, R9E (DWR# 7S/9E-24R)

Latitude/Longitude: Lat. 37° 18' 19"/Long. 120° 55' 19"

County: Merced

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Irrigation tail water during irrigation season and storm flows during the rainy season.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 126.1

Site Name: Flood Gates 19E-22E River Mileage: 126.1-128.8

Site description, location and access: There are four flood gates on the right (east) bank of the San Joaquin River in this reach. They are designed to discharge surface runoff into the River during and after flood flows. They have the potential to discharge tail water, but staff inspections have not detected extensive use for this purpose. Access to the sites is via the east levee road south from and Highway 140.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Lower San Joaquin Levee District Unit No. 2 - Left (West) Bank San Joaquin River.

Site#	Miles North of Lander Avenue	Unit No. 1 Levee Mileage	Site Description
19E	0.8	4.73	24-inch CM pipe through the levee, 10.0 feet below the crown. Flap gate on the waterward end.
20E	1.1	5.06	24-inch CM pipe through the levee, 8.0 feet below the crown. Flap gate on the waterward end.
21E	2.0	5.96	24-inch CM pipe through the levee, 8.6 feet below the crown. Flap gate on the waterward end.
22E	2.5	6.44	24-inch CM pipe through the levee, 9.5 feet below the crown. Flap gate on the waterward end. Slide gate on the landward end.

Comments on factors affecting water quality and quantity at the site: Discharge water should be of good quality as they normally discharge rainfall runoff.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 129.0D

Site Name: Stevinson Water District
Operational Spill #3

River Mileage: 129.0

Site description, location and access: The drain is located 2.2 miles south of Highway 140 on the east levee road and is accessed via the east levee. Water from the landward side of east levee is drained to the river flood plain by a 48-inch CM pipe through the levee, 13.1 feet below the crown. Flap gate on the waterward end.

Township/Range/Section: SW 1/4, SE 1/4, SW 1/4, Section 20, T7S, R10E (DWR# 7S/10E-20P)

Latitude/Longitude: Lat. 37° 18' 22"/Long. 120° 53' 50"

County: Merced

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Irrigation tail water during the irrigation season.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID # SJW 129.50

Site Name: Salt Slough River Mileage: 129.5

Site description, location and access: Salt Slough enters the San Joaquin River between Highway 140 and Lander Avenue. Access to the site is very difficult and requires considerable driving on levees as well as walking through thick undergrowth. Staff inspections show no surface inflow to Salt Slough downstream of its crossing of Lander Avenue.

Township/Range/Section: NE 1/4, SW 1/4, Section 29, T7S, R10E
(DWR# 7S/10E-29N)

Latitude/Longitude: Lat. 37° 17' 39"/Long. 120° 53' 55"

County: Merced USGS Quad Map: Gustine

Type and source of water being discharged (description): The discharge from Salt Slough contains a mixture of tile drainage water, surface tail water, operational spills from upslope districts as well as natural flow from west side creeks. Another input is from duck ponds that discharge after the hunting season. The water from these ponds is a blend of freshwater and the other sources listed above that have been put in the ponds.

Comments on factors affecting water quality and quantity at the site: Salt Slough receives drainage water from irrigated farm land on the west side of the San Joaquin River. Staff inspection of the slough did not detect any significant surface drainage to Salt Slough below Lander Avenue.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	*MER 531	minerals, trace elements, & Se	monthly		CVRWQCB Files

*Sampled at Lander Avenue

San Joaquin River Section #11

Fremont Ford Bridge (Highway 140) to Upstream of Mud Slough (north)

SAN JOAQUIN RIVER

Section 11: Fremont Ford Bridge (Hwy. 140) to Upstream of Mud Slough (North)

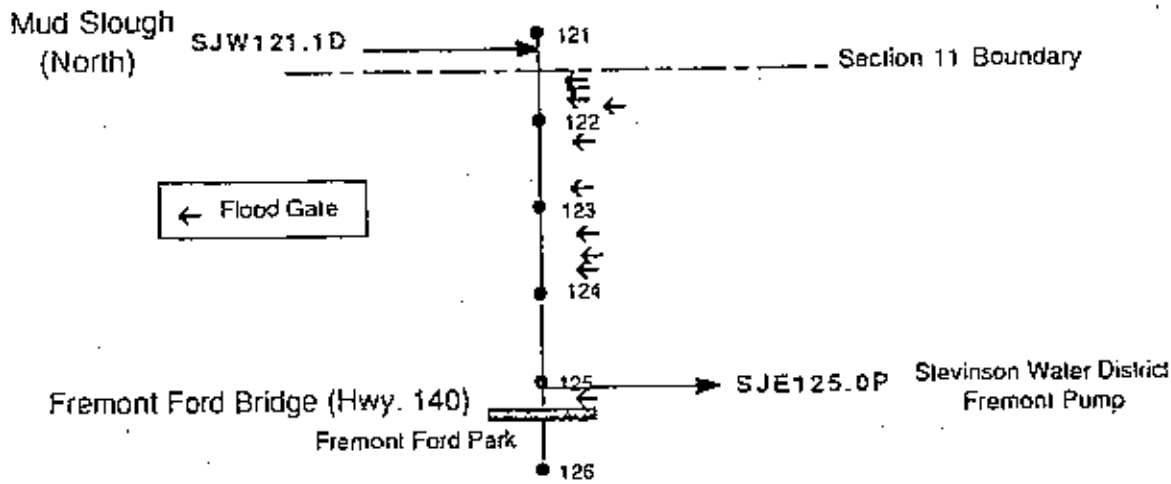


Figure A-11. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Fremont Ford Bridge (Hwy.140) to Upstream of Mud Slough (North) (River Section 11).

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 125.0P

Site Name: Stevinson Water District
Fremont Pump

River Mileage: 125.0

Site description, location and access: The pump is located along the eastern bank levee immediately north of the Fremont Ford Bridge. Access to the site is via the project levee at its intersection with Highway 140. The single pump is used to irrigate land within the flood plain and a 12-inch concrete pipe through the levee, 3.5 feet below the crown also provides access to lands outside the flood plain.

Township/Range/Section: SW 1/4, SW 1/4, NE 1/4, Section 24, T7S, R9E, (DWR # 7S/9E-24G)

Latitude/Longitude: Lat. 37° 18' 47"/Long. 120° 55' 47"

County: Merced

USGS Quad Map: Gustine

Type of diversion and use of the water: San Joaquin River water is diverted for use in 300 acres of land. The principle crops being grown are pasture (100 acres),corn and oats on fields located in the flood plain north of the Fremont Ford Bridge and on lands north and south of Highway 140 above the levee.

Water Right Permit Number: No#

Pump Size: 75hp

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 121.2D

Site Name: Flood Gates 9-18 River Mileage: 121.2 - 125.2

Site description, location and access: There are 10 flood gates on the right (east) bank levee of the San Joaquin River in this reach; they are designed to discharge surface runoff into the river during and after flood flows. They have the potential to discharge irrigation tail water but staff inspections have not detected extensive use for this purpose. Access to the site is via the project levee at River Road (Highway J18). Location is noted in miles from this entry point.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description):

LOWER SAN JOAQUIN LEVEE DISTRICT
UNIT NO. 1 - RIGHT BANK SAN JOAQUIN RIVER

Site #	Levee Mileage (miles south of River Road Highway J18)	Site Description
09	1.70	24-inch CM pipe through the levee, 13.6 feet below the crown. Flap gate on the waterward end.
10	1.84	36-inch CM pipe through the levee, 14.2 feet below the crown. Flap gate on the waterward end.
11	1.98	24-inch CM Pipe through the levee, 9.7 feet below the crown. Flap gate on the waterward end.
12	2.08	24-inch CM Pipe through the levee, 9.8 feet below the crown. Flap gate on the waterward end.
13	2.25	36-inch CM pipe through the levee, 2.6 feet below the crown. Flap gate on the waterward end.

Site #	Levee Mileage (miles south of River Road Highway J18)	Site Description
14	2.53	24-inch CM pipe through the levee, 9.0 feet below the crown. Flap gate on the waterward end.
15	2.71	24-inch CM pipe through the levee, 7.3 feet below the crown. Flap gate on the waterward end.
16	3.17	36-inch CM pipe through the levee, 10.1 feet below the crown. Flap gate on the waterward end.
17	3.50	36-inch CM Pipe, through the levee, 9.7 feet below the crown. Flap gate on the waterward end.
18	3.95	30-inch CM pipe through the levee, 3.5 feet below the crown. Irrigation pipe. Slide gate on the waterward end.

Comments on factors affecting water quality and quantity at the site: Discharge water should be of good quality as they normally discharge rainfall runoff.

San Joaquin River Section #12

Mud Slough (north) to Hills Ferry Road Bridge

SAN JOAQUIN RIVER

Section 12: Mud Slough (North) to Hills Ferry Road Bridge

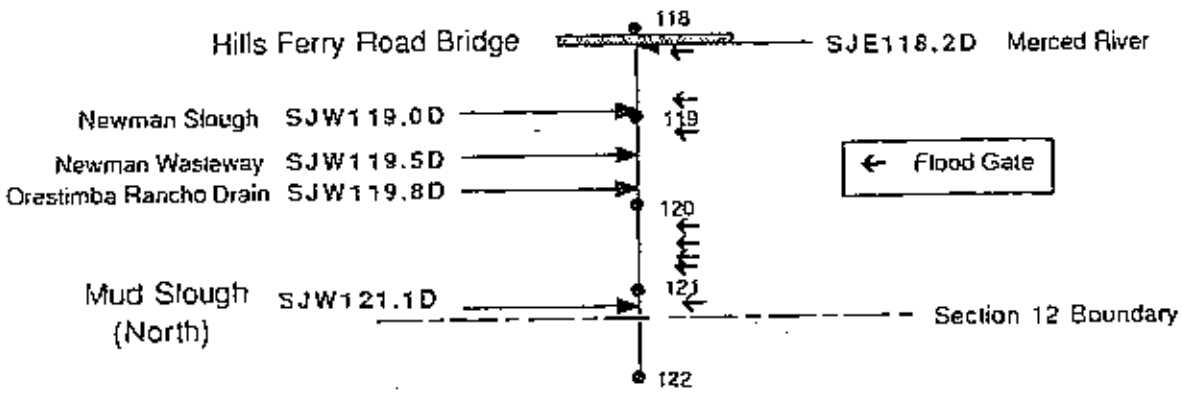


Figure A-12. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Mud Slough (North) to Hills Ferry Road Bridge (River Section 12).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 121.1D

Site Name: Mud Slough (North) River Mileage: 121.1

Site description, location and access: Mud slough discharges to the San Joaquin River at River Mile 121.1. Access to the actual discharge point is very difficult because of no roads. Major flow and quality samples are normally taken at Highway 140.

Township/Range/Section: NW 1/4, NE 1/4, NW 1/4, Section 14, T7S, R9E (DWR# 7S/9E-14C)

Latitude/Longitude: Lat. 37° 19' 52"/Long. 120° 57' 03"

County: Merced USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Mud Slough receives drainage water (both tile drainage and surface tail water) from several hundred square miles of irrigated land and flows that passes through the Grassland Water District. The entire flow of the slough is made up of irrigation return flows during most of the year but in November-March, a considerable portion is made up of discharges from Duck Ponds in the Grassland Area.

Comments on factors affecting water quality and quantity at the site: Quality of the Slough is degraded. It contains high salts, boron and trace elements including selenium. It is periodically monitored at Highway 140 by the USBR (site #MSL140) and the DWR (site # BO-0400). Regional Board staff inspections revealed additional input to Mud Slough from Los Banos Creek and other sources downgradient from Highway 140. Hence, the water quality data at Highway 140 indicates a waste discharge to the River from upgradient sources, but may not match the water quality at the discharge of Mud Slough into the SJR.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 119.8D

Site Name: Orestimba Rancho Drain River Mileage: 119.8

Site description, location and access: This is an area drain that meanders throughout several hundred acres that lie northeast of the City of Gustine and lying between Mud Slough and the Newman Wasteway. Access to the discharge site is through a number of farm roads many of which are inaccessible during certain times of the year or are blocked by locked gates.

Township/Range/Section: SE 1/4, NE 1/4, SW 1/4, Section 10, T7S, R9E (OWR# 7S/9E-10L)

Latitude/Longitude: Lat. 37° 20' 13"/Long. 120° 58' 06"

County: Merced USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): This drain carries both surface supply water and tail water from the surrounding fields. The water is held in the drain and the only discharge is through a 6" plastic pipe as an overflow.

Comments on factors affecting water quality and quantity at the site: Quality will be influenced by the amount of supply water entering the drain.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 119.5D

Site Name: Newman Wasteway River Mileage: 119.5

Site description, location and access: Newman Wasteway discharges into the San Joaquin River immediately south of the Stanislaus-Merced County line. Access to the Wasteway is through the Newman Wastewater Treatment Plant to the Wasteway levee. Follow the Wasteway levee east to the discharge point.

Township/Range/Section: SE 1/4, NW 1/4, SW 1/4, Section 10, T7S, R9E, (DWR# 7S/9E-10M)

Latitude/Longitude: Lat. 37° 20' 26"/Long. 120° 58' 17"

County: Merced USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): This wasteway carries primarily operational spill water from the Delta Mendota Canal. In addition, there are numerous tail water discharges that enter this system as well as operational spills from local irrigation districts. On the north bank there are approximately 5500 acres that drain to this wasteway (see map 1a). The acreage that drains from the south bank has not been determined. The Newman Wasteway is monitored as Site# MER544, located at the School Road overcrossing. The sources of irrigation water to this drainage area are the Delta Mendota Canal, Central California Irrigation District, and on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The discharge quality will be dependent upon the proportion of operational spill and tail water that enters the system. As the channel is deeply entrenched, seepage into the wasteway by high ground water is also likely. As the channel has little slope east of Highway 33, sampling east of this point may encounter backwater from the San Joaquin River.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	MER 544	Standard minerals, trace elements, Se, Suspended Sediments.	Monthly	4/86-Present	CVRWQCB Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 119.0D

Site Name: Newman Slough River Mileage: 119.0

Site description, location and access: This slough enters the San Joaquin River immediately north of the Newman Wasteway and immediately north of the Merced County line. This slough receives surface and subsurface drainage from approximately 4,500 acres (see map 1a). Access to the discharge site is very difficult therefore sampling and sample measurement are carried out on the 3 discharges into the Slough. These three discharges make up the entire discharge to the river. The three discharges are:

1. Newman Drainage District Collector Line "A": This drainage collector was installed in 1978 and as a result has held the water table relatively constant thus there is little projection that on-farm drainage will be installed in the near future within the Newman Drainage District. There are approximately 800 acres that are served by this collection system (see map 1b). Line A discharges into the Newman slough about 200 yards east of the flood levee protecting the City of Newman Wastewater Treatment Plant (WWTP). The discharge occurs 100 feet north of the WWTP discharge into the same slough. Access to the sampling site is through the City's WWTP. This area is often flooded in winter and an alternate sampling site is at a Manhole either at Stuhr Road (south side of Hills Ferry Road) or immediately on the east side of the flood levee. Access to the WWTP is off of Hills Ferry Road.

2. City of Newman Wastewater Treatment Plant: The Newman Wastewater Treatment Plant (WWTP) discharges adjacent to the discharges of the Newman Drainage District Line A and the Hills Ferry Drain. The discharge is from an open channel and is the southern most of the three discharges in the area. All three discharges enter a small slough that enters the San Joaquin River at Mile 119.1. The WWTP discharges infrequently and this is normally in the winter period. The Newman Wastewater Treatment Plant (WWTP) is located on the south side of Hills Ferry Road on the north side of the Newman Wasteway. The discharge point is one of three (2 open channel, 1 pipeline) in the same area. The Newman WWTP is the southern most open channel.

3. Hills Ferry Drain: The Hills Ferry Road Surface Drain discharges into an unnamed slough about 200 yards east of the flood levee protecting the City of Newman Wastewater Treatment Plant (WWTP). The discharge occurs 50-100 feet north of the WWTP discharge into the same slough. The discharge channel runs parallel to the outlet channel for the WWTP discharge. The discharge channel runs through the levee, however, a flap gate exists on the river side of the flood levee. In high water stages, a pump discharge occurs. Access to the site is off Hills Ferry Road through the City's WWTP. As access may be limited and no additional inputs occur after the flood levee, the best sampling site is the drain as it crosses under the levee.

Township/Range/Section: SE 1/4, SE 1/4, NE 1/4, Section 9, T7S, R9E (DWR# 7S/9E-9H)

Latitude/Longitude: Lat. 37° 20' 27"/Long. 120° 58' 34"

County: Stanislaus

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): The discharge from the Newman Drainage District Collector Line A carries only subsurface drainage flow from approximately 800 acres of irrigated land that is located to the north of the Newman Wasteway and east of Highway 33 runs north and south from the towns of Newman to Crows Landing (see map 1b). The irrigated area immediately to the north is also drained therefore little influence would be expected from outlying areas except any subsurface flows that may originate from the Newman Wasteway.

The discharge from the City of Newman Wastewater Treatment Plant is composed entirely of treated municipal wastewater.

The discharge from the Hills Ferry Road Drain carries only surface runoff, operation spills from Central California Irrigation District Canals, and tail water discharges from individual irrigated fields. The area drained by this drain is approximately 4500 acres around the City of Newman and Hills Ferry Road. The majority of the flow during the irrigation season is made up of tail water discharges from irrigated land located on both the north and south side of Hills Ferry Road. There is no subsurface drainage that enters the Hills Ferry Road Drain and none is projected.

The surface water carried by this drain is conveyed along Hills Ferry Road until approximately the City of Newman's wastewater treatment plant. At this point, it turns to the south and runs to an area near the plant where it either flows through the levee into Newman slough or is pumped over the levee (during flood periods) into the same slough. One important input to this system as it flows to the south is that it picks up tail water from the irrigated pasture that the City of Newman uses to dispose of it sewage effluent. While runoff is a rather small portion of the total flow, mismanagement of the wastewater reuse system could result in considerable flow into the drain.

Comments on factors affecting water quality and quantity at the site:

1. During river flood stages, the outlet is frequently under water thus backing up water in the collector system.

2. Water quality at this discharge is likely to be similar in characteristics to the Line I discharge which is 1.5 miles downstream. The discharge is composed entirely of subsurface tile drainage water from agricultural lands on the north and south side of Hills Ferry Road. The collection system is entirely closed therefore no other input can enter the system other than those illegally poured down one of the periodic manholes. There are no on-farm drainage systems (subsurface) within this portion of the Newman

Drainage District and none are projected. The quality of the water discharging from the collector line would represent shallow ground water characteristics in the area. During any water quality evaluation, the water quality data from this area could be compared with that from the Newman Drainage District Collector Line I (site # STC 009), however caution should be used as the quality from Line A is likely to be slightly worse than Line 1 as the intensity of the collection system within the Line A area is less than that in the Line 1 area. The discharge from the City of Newman Wastewater Treatment Plant is restricted to not more than 1% of the river flow. The plant is to have no discharge from June to September each year. The design flow for the plant is 1.2 MGD.

The discharge quality and quantity from the Hills Ferry Drain will depend heavily upon the cropping pattern in the area, irrigation intensity and other agricultural practices. The quality is likely to reflect the influence of surface runoff rather than agricultural subsurface drainage water.

MONITORING

Several sources of data are available:

1. The West Stanislaus Resource Conservation District, 218 North El Circulo, Patterson, CA has been measuring temperature, flow, and salinity (EC) from Line A since it was installed in 1978. Monthly measurements are taken, however, the data needs to be checked for completeness and accuracy as often the measurements are only taken during the summer irrigation season (June-Sept).

2. The United States Bureau of Reclamation, 2800 Cottage Way, Sacramento, CA sampled this site monthly from August 1982 to October 1983 for standard minerals, trace elements and nutrients. The data is stored in STORET as USBR Site # DSA 03A. The sampling point shown for the USBR site is different from that used by the Regional Board, however, the data can be analyzed together with Regional Board data as the sampling site is less than 1/4 mile from the Regional Board's site and there are no additional inputs between these two points.

2. The United States Geological Survey sampled this site in May 1984 for standard minerals and trace elements. Their results are reported in USGS Report #84-4319 as site 3A. This site is the same as used by the U.S. Bureau of Reclamation and the data should be comparable as described in #2 above.

San Joaquin River Discharge Site
Newman Slough

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
USBR	DSA 03A	Standard minerals, trace elements, nutrients	Monthly	8/82-10/83	STORET
USGS	3A	Standard minerals, trace elements	once	5/84	USGS Report #84-4319
West Stanislaus RCD	7A	EC, temperature, flow	monthly (May-Oct)	9/78, 6/79-Present	WSRCD Files
CVRWQCB	Newman WWTP	BOD, coliform	monthly		CVRWQCB Files
CVRWQCB	Newman WWTP	TDS	annually		CVRWQCB Files
CVRWQCB	STC 010 STC 014 STC 020	standard minerals, trace elements, Se, & suspended sediment	monthly	11/85-Present	CVRWQCB Files

(note that these samples are often taken on the pond effluent and not the discharge)

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 119.00

Site Name: Flood Gates 1E-8E

River Mileage: 118.2-121.1

Site description, location and access: There are eight flood gates on the right bank levee of the San Joaquin River in this reach; they are designed to discharge surface runoff into the River during/after storms. They also have the potential to discharge irrigation tail water, but staff inspections have not detected such use.

Township/Range/Section: N/A

Latitude/Longitude: N/A

County: Merced

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Lower San Joaquin Levee District Unit No. 1 - Right Bank San Joaquin River.

Site#	Levee Mileage (Miles South of River Road)	Site Description
01E	0.00	24-inch CM pipe through the levee, 10.5 feet below the crown. Flap gate on the waterward end. Brass cap BM on headwall on the landward side. No. 108, elevation 65.1 feet, USGS Datum.
02E	0.35	36-inch CM pipe through the levee, 18.5 feet below the crown, flap gate on the waterward end.
03E	0.62	24-inch CM pipe through the levee, 8.5 feet below the crown, flap gate on the waterward end.
04E	0.88	24-inch CM pipe through the levee, 8.5 feet below the crown, flap gate on the waterward end.
05E	0.96	24-inch CM pipe through the leve, 9.0 feet below the crown. Flap gate on the waterward end.
06E	1.18	24-inch CM pipe through the levee, 7.5 feet below the crown. Flap gate on the waterward end.

Site#	Levee Mileage (Miles South of River Road)	Site Description
07E	1.35	36-inch CM pipe through the levee, 12.8 feet below the crown. Flap gate on the waterward end.
08E	1.48	24-inch CM pipe through the levee, 11.0 feet below the crown. Flap gate on the waterward end.

Comments on factors affecting water quality and quantity at the site: Discharge water should be of good quality as normal rainfall runoff.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 118.2D

Site Name: Merced River River Mileage: 118.2

Site description, location and access: This site is immediately upstream (south) of the Hills Ferry Bridge. Access to the site is by boat.

Township/Range/Section: NW 1/4, SW 1/4, SW 1/4, Section 3, T7S, R9E (DWR# 7S/9E-3N)

Latitude/Longitude: Lat. 37° 20' 57"/Long. 120° 58' 28"

County: Stanislaus USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Natural stream flow from the Sierras.

Comments on factors affecting water quality and quantity at the site: Discharge into the river and diversions from the river are likely to affect quality at this site. This river has flow monitoring information since 1940 and some quality measurements from a sampling station near Stevinson (DWR site# BD-5125) approximately 4 miles upgradient from the junction with the San Joaquin River. There are outtake pumps below the DWR site.

San Joaquin River Section #13

Hills Ferry Road Bridge to Crows Landing Road Bridge

SAN JOAQUIN RIVER

Section 13: Hills Ferry Road Bridge to Crows Landing Road Bridge

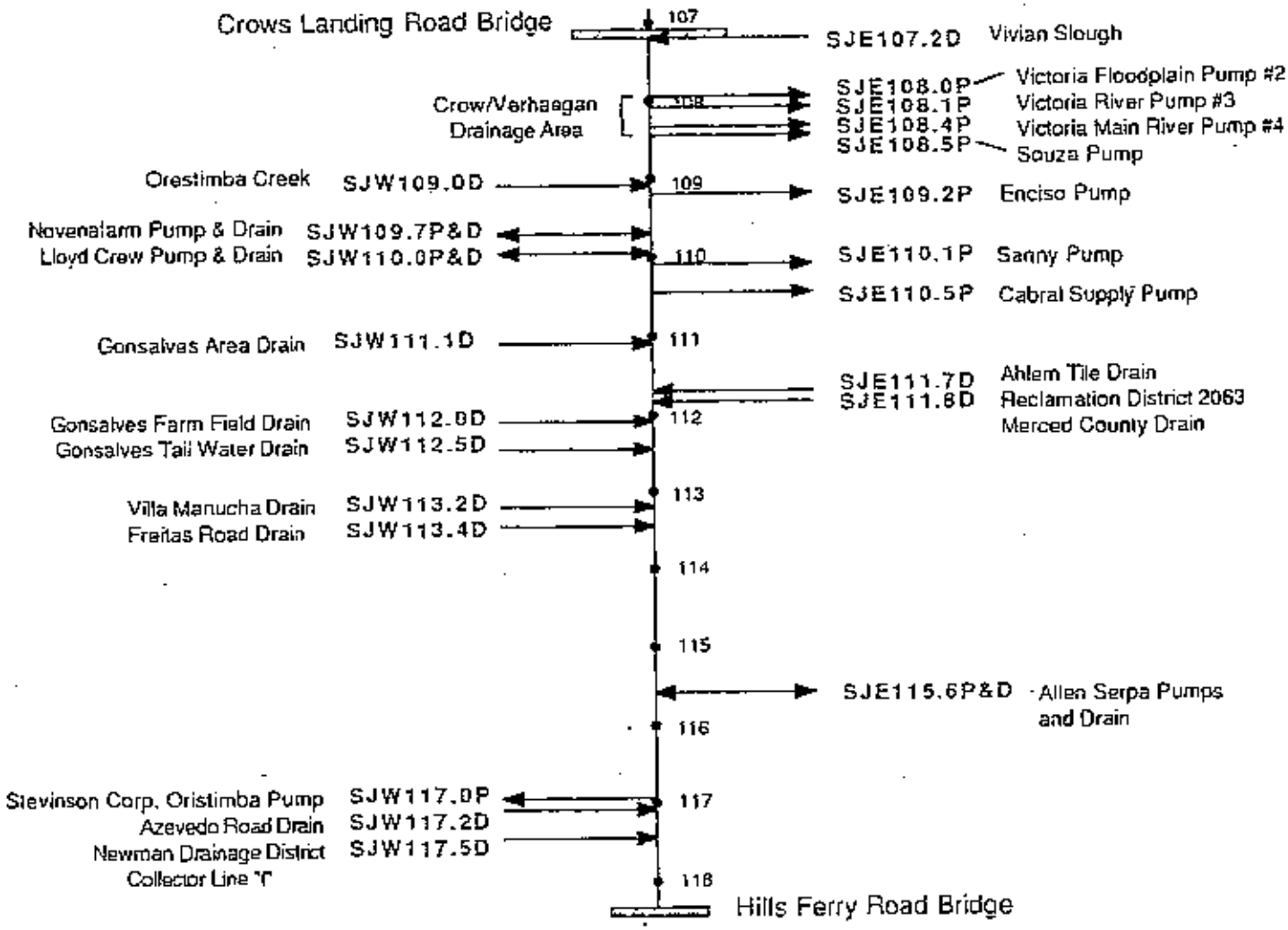


Figure A-13. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Hills Ferry Road Bridge to Crows Landing Road Bridge (River Section 13).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 117.5D

Site Name: Newman Drainage District Collector Line "1"

River Mileage: 117.5

Site description, location and access: Newman Drainage District Collector Line "1" discharges directly into the San Joaquin River at Mile 117.5. The discharge is approximately 1/4 mile east of River Road and 0.6 miles north of Hills Ferry Road. Access to the sampling point is through the trailer park on the east side of River Road. Check with the owner to be sure he understands that you need access. The discharge pipe into the river is readily accessible for sampling except during periods of high flow in the San Joaquin River.

Township/Range/Section: NE 1/4, SE 1/4, NE 1/4, Section 4, T7S, R9E (DWR# 7S/9E-4H)

Latitude/Longitude: Lat. 37° 21' 27"/Long. 120° 58' 42"

County: Stanislaus

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): The discharge from the Newman Drainage District Collector Line "1" carries only subsurface drainage flow from approximately 2450 acres of irrigated land that is located north of Hills Ferry Road, east of Villa Manucha Road, south of Freitas Road and West of River Road (see attached map). The irrigated area immediately to the south is also drained, therefore little influence would be expected from this outlying area. Some influence from outlying areas may occur around the remainder of the district, but the collection system is so extensive, the greatest influence is still the collection system.

There are 93 acres of on-farm tile drainage within this portion of the Newman Drainage District. It was installed in 1979 and none is projected to be installed because the collection system maintains the ground water table levels. The quality discharging from the collection system would represent shallow ground water quality in the area. During any water quality evaluation, the water quality data from this area could be compared with that from the Newman Drainage District Collector Line A (Site #STC 010).

The quality of the discharge is representative of shallow ground water quality in this entire area up to Orestimba Creek, however, there is little likelihood that subsurface drainage will be installed in the area between Villa Manucha Road and Orestimba Creek as natural drainage to the creek and the San Joaquin River is likely to keep the shallow ground water table low enough to allow economical crop production; this is in part because of the low salt content of the drainage water thus allowing a higher level of tolerance to high ground water conditions that may exist for short periods during the growing season.

Comments on factors affecting water quality and quantity at the site: During river flood stages, the outlet is frequently under water thus backing up water into the collection system otherwise freeflow into the river occurs. Water

quality at this discharge is likely to be similar in characteristics to the Line A discharge which is 1.5 miles upstream. The collection system is entirely closed, therefore no other input can enter the system other than those illegally poured down one of the periodic manholes.

Several sources of data are available:

1. The West Stanislaus Resource Conservation District, 218 North El Circulo, Patterson, CA has been measuring temperature, flow, and salinity(EC) from Line "I" since it was installed in 1978. Monthly measurements are taken, however, the data needs to be checked for completeness and accuracy as often the measurements are only taken during the summer irrigation season (June-Sept). The data from this site could be combined with the data from Newman Drainage District Line A (Site STC 010) as both drain similar areas with similar agricultural practices.

2. The United States Bureau of Reclamation, 2800 Cottage Way, Sacramento, CA samples this site as part of their continuous monitoring of tile drainage on the West side of the San Joaquin Valley. They have sampled this site monthly since August 1982 for standard minerals, trace elements, the nutrients. The data is stored in STORET as USBR Site # DSA 03B. The data in STORET is current within a year or two while the remainder of the data is stored on a microcomputer at the USBR HQ in Sacramento. The sampling point for the USBR is different from that used by the Regional Board, however, the data can be analyzed together with Regional Board data as the sampling site is less than 1/4 mile upstream from the Regional Board's site and there are no additional inputs between these two points. The USBR site is often used by the Regional Board when river flows prevent access to the discharge pipe into the river.

3. The United States Geological Survey sampled this site in May 1984 for standard minerals and trace elements. Their results are reported for USGS Report #84-4319 as site 3B. This site is the same as used by the U.S. Bureau of Reclamation and the data should be comparable as described in #2 above.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 117.2D

Site Name: Azevedo Road Drain

River Mileage: 117.2

Site description, location and access: The Azevedo Road Drain flows under River Road immediately south of Azevedo Road and discharges into the San Joaquin River at Mile 117.2. The sampling site is at the River Road Crossing. Access to the drain is off River Road. However it is not possible to reach the point where it discharges to the river. Often the discharge flows into old channels of the river and seeps into the river. The surface water carried by the drain exits the cropped area at or near the boundary of the Newman Drainage District. The drainage then proceeds through a pasture area before exiting the area under River Road.

Township/Range/Section: NW 1/4, SW 1/4, SE 1/4, Section 33, T6S, R9E (DWR# 6S/9E-33Q)

Latitude/Longitude: Lat. 37° 21' 50"/Long. 120° 58' 48"

County: Stanislaus

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): The discharge is composed entirely of surface runoff and irrigation tail water from approximately 2830 acres of agricultural lands. No tile drainage or other subsurface drainage enters this system as the entire area is part of the Newman Drainage District. Operation spill water from Central California Irrigation District canals occasionally enters the drain. This drainage area is bounded on the West by the Central California Irrigation District Main Canal and on the south approximately by Stuhr and Hills Ferry Roads (see map 1a). This drain is monitored as Site# 015. The sources of irrigation water to this area are the Central California Irrigation District Main Canal and possible on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: Flow and quality at this site will depend upon the cropping pattern in the area. The quality is likely to reflect the influence of surface runoff rather than agricultural subsurface drainage water. The surface flows move through an unirrigated area that has considerable pasture lands and this may influence the quality.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 015	trace elements, standard min., selenium, and suspended sediment	monthly	10/85-present	CVRWQCB Files
West Stanislaus RCD	9	Flow, EC, and temp.	monthly (May-Sept)	8/72 present	WSRCD Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 117.0 P

Site Name: Stevinson Corporation Orestimba Pump

River Mileage: 117.0

Site description, location and access: Site is located along the western bank of the San Joaquin River at the southern end of the irrigated area east of River Road. The site is approximately 500 feet east of River Road on the appropriate alignment of Azevedo Road. Access to the site is via a farm Road east off of River Road.

Township/Range/Section: NW 1/4, SW 1/4, SE 1/4, Section 33, T6S, R9E, (DWR # 6S/9E-33Q)

Latitude/Longitude: Lat. 37° 21' 51"/Long. 120° 58' 49"

County: Stanislaus

USGS Quad Map: Gustine

Type of diversion and use of the water: San Joaquin River water is diverted for irrigation use on 180 acres of irrigated crops between River Road and the San Joaquin River and north of the alignment of Azevedo Road. Principle crops are corn and alfalfa.

Pump size: 40hp

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 115.6D

Site Name: Allen Serpa Drain

River Mileage: 115.6

Site description, location and access: This is a tailwater drain that is located along the eastern project levee, 0.2 miles north of the intersection of Turner Avenue and Central Avenue and 0.75 miles west of Central Avenue. Access to the site is via a farm road west off of Central Avenue and 0.25 miles north of Turner Road intersection. Proceed 0.75 miles west then turn south along the project levee approximately 0.15 miles (500 feet south of the Allen Serpa Pumps).

Township/Range/Section: SE 1/4, NW 1/4, NW 1/4, Section 34, T6S, R9E (DWR# 6S/9E-34D)

Latitude/Longitude: Lat. 37° 22' 23"/Long. 121 58' 22"

County: Merced

USGS Quad Map: Gustine

WATER SOURCE

Type and source of water being discharged (description): Tailwater from 290 acres of irrigated land along the river. Discharge does not enter the river directly as it ponds in the trees and seeps to the river or by direct overflow.

Comments on factors affecting water quality and quantity at the site: May be high in sediment depending on the crops being grown.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 115.6 P

Site Name: Allen Serpa Pumps River Mileage: 115.6

Site description, location and access: Two diversion pumps are at one site located along the eastern project levee, 0.2 miles north of the intersection of Turner Avenue and Central Avenue and 0.75 miles west of Central Avenue. Access to the site is via a farm road west off of Central Avenue and 0.25 miles north of Turner Road intersection. Proceed 0.75 miles west then turn 0.1 miles south along the project levee.

Township/Range/Section: SE 1/4, NW 1/4, NW 1/4, Section 34, T6S, R9E, (DWR # 6S/9E-34D)

Latitude/Longitude: Lat. 37° 22' 25"/Long. 121° 58' 22"

County: Merced USGS Quad Map: Gustine

Type of diversion and use of the water: San Joaquin River Water is diverted for irrigation of 450 acres of alfalfa, corn, oats.

Water Right Permit Number: No #
Pump #1 Size: 20hp
Pump #2 Size: 40hp

SITE ID# SJW 113.4D

Site Name: Freitas Road Drains River Mileage: 113.4

Site description, location and access: There are three drains that flow into a slough and discharge at mile 113.4. Access to the mile 113.4 discharge is not possible. The three drains are:

1. Freitas Road Drain at River Road: This tail water drain flows under River Road at Freitas Road and discharges into the San Joaquin River at Mile 113.4. The sampling site is at the River Road crossing. Access to the sampling site is off River Road. Sample on the east side of the Road because of two incoming small drains on the west side of River Road. The Freitas Road drainage area consists of approximately 1930 acres. This area is bounded on the south by Freitas Road, on the north by Villa Manucha Road, and on the west by the Central California Main Canal (see map 1a). This drain is monitored as Site# STC017.

2. Tail water Drain 1/2 Mile South of Freitas Road at River Road: This tail water drain flows under River Road 1/2 mile south of Freitas Road and discharges into the San Joaquin River at Mile 113.4. The sampling site is at the River Road Crossing. Access to the sampling site is off River Road. This drainage area consists of approximately 700 acres bounded on the north by Freitas Road, on the west by Villa Manucha Road, and on the south by this drain (see map 1a). This drain is monitored as Site# STC016.

3. Tail water Drain, Stevinson Corporation: This drain carries tail water from 400 acres of the Stevinson Corporation Orestimba Ranch. This area is located on the floodplain east of River Road. There are a series of sloughs in this area which may receive a large portion of this area's drainage.

Township/Range/Section: NE 1/4, NW 1/4, SW 1/4, Section 28, T6S, R9E (DWR# 6S/9E-28M)

Latitude/Longitude: Lat. 37° 23' 01"/Long. 120° 59' 33"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): The discharge is composed entirely of surface runoff and irrigation tail water from approximately 3000 acres of agricultural lands north of Lundy Road and north and south of Freitas Road. No tile drainage or other subsurface drainage water enters this system as the entire area is part of the Newman Drainage District. This system carries a substantial portion of operation spill water from the CCID canals. The sources of irrigation water to this area are the Central California Irrigation District Main Canal and possibly on-farm irrigation wells. There is a diversion pump on the San Joaquin River at mile 117.0 which supplies irrigation water to the Stevinson Corporation Orestimba Ranch area.

Comments on factors affecting water quality and quantity at the site: The flows in these drains will be influenced by surface runoff and tail water from the irrigated lands and also from the amount of operational spill water that enters the system.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 113.2D

Site Name: Villa Manucha Drain River Mileage: 113.2

Site description, location and access: This surface runoff drain flows under River Road at Villa Manucha Road and discharges into a slough that leads to the San Joaquin River. The sampling site is at the River Road crossing because of access. Sample on the east side of the Road because of access and other drains entering the system immediately to the West of River Road.

Township/Range/Section: NW 1/4, SW 1/4, NW 1/4, Section 28, T6S, R9E (DWR# 6S/9E-28E)

Latitude/Longitude: Lat. 37° 23' 12"/Long. 120° 59' 36"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): This discharge is composed entirely of surface runoff from approximately 15 acres adjacent to Villa Manucha Road. There may be some tail water that enters this drain, but none was observed in the field survey. No tile drainage is known to enter this system.

Comments on factors affecting water quality and quantity at the site: The flow and quality of this drain is influenced by surface runoff. The ground water would not be expected to influence this site as most ground water seepage would be toward Orestimba Creek and the San Joaquin River. No known areas of high water tables have been recorded in the area. This is a small drain and no known Monitoring of this site has occurred.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 112.5D

Site Name: Gonsalves Tail Water Drain River Mileage: 112.5

Site description, location and access: This site receives tail water from a 14-acre area on the Gonsalves Farm. The area is located approximately 1.9 miles south of Orestimba Creek on the east side of River Road. Access to the site is via the same farm road as Site# SJWI12.00. This farm road is located approximately 0.1 miles north of Villa Manucha Road (just north of a blue shop building). Go east on this road toward the river. This drain goes through the levee just before this road goes up onto the levee (see map 1a).

Township/Range/Section: SW 1/4, NE 1/4, SW 1/4, Sec. 21, T6S, R9E (DWR# 6S/9E-21L)

Latitude/Longitude: Lat. 37° 23' 43"/Long. 120° 59' 03"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water from approximately 14 acres of row crops. No tile drainage. The sources of irrigation water to this area are the Central California Irrigation District Main Canal and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: The flow to this drain is dependent on the amount of irrigation to this 14-acre area. This drain may carry a high sediment load.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 112.0D

Site Name: Gonsalves Farms Field Drain River Mileage: 112.0

Site description, location and access: This site is located northeast of the Villa Manucha-River Road intersection (see map Ia). The site is accessed via a farm road just north of Villa Manucha Road. There is a blue building on the east side of River Road just north of the Villa Manucha Road. Just north of this building (shop) is the farm road to this drain. Follow the road to the river. This discharge pipe goes through the levee in the middle of the meander (see map Ia).

Township/Range/Section: NW 1/4, SW 1/4, NE 1/4, Sec. 21, T6S, R9E (DWR# 6S/9E-21G)

Latitude/Longitude: Lat. 37° 24' 02"/Long. 120° 59' 03"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water from a 100-acre irrigated field adjacent to the San Joaquin River. There are no known tile drainage systems in this area. The sources of irrigation water to this area are the Central California Irrigation District Main Canal and on-farm irrigation wells (see map Ib).

Comments on factors affecting water quality and quantity at the site: The flow to this drain depends on the amount of irrigation to this 100-acre area. The drainage water is expected to carry a high sediment load.

SITE ID# SJE 111.8D

Site Name: Reclamation District No. 2063
Merced County Drain

River Mileage: 111.

Site description, location and access: This discharge consists of flow that originates in Turlock Irrigation District including the Stadtler Drain, the Hilmar Drain and several other smaller drains entering from the southeast portion of Turlock Irrigation District. There are two drains that meet at the Stadtler Drain Pumps and then flow north along the levee and discharges to the San Joaquin River at mile 111.8. Access to the site is via the eastern project levee at Crows Landing Road or off of August Road.

Township/Range/Section: SW 1/4, NW 1/4, NE 1/4, Section 21, T6S, R9E (DWR# 6S/9E-21B)

Latitude/Longitude: Lat. 37° 24' 09"/Long. 120° 58' 53"

County: Stanislaus

USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): The discharge consists of water from 3 principle drainage systems:

1. Stadtler Drain: This drain carries tailwater and operational spill water from within Turlock Irrigation District and land immediately adjacent to the river. In addition, the Ahlem Ranch discharges tile drainage from approximately 25 acres of land into this drain. The tile drainage discharge occurs near the pumping station at the levee. The drain gravity flows into the San Joaquin River during low flow periods while at high flows, it is pumped out by 2-30hp pumps. Turlock Irrigation District helps maintain the drain but the pump ownership and operation are those of Reclamation District 2063.

2. Hilmar Drain: This drain carries tailwater from that portion of Turlock Irrigation District that lie adjacent to Williams Avenue. There are no known tile drainage discharges within this area. The flow moves along Williams Avenue and then flows on the river side of the levee after it begins near Central Avenue. Operational spill from the Turlock Irrigation District also enters the system.

3. Southern Drain: This drain carries tailwater and operational spill water from irrigated areas in the vicinity of Central Avenue and Turner Road.

Comments on factors affecting water quality and quantity at the site: Water quality at the site will be dependent upon the proportion of each drainage system that is entering the drains.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 111.7D

Site Name: Ahlem Tile Drain River Mileage: 111.7

Site description, location and access: This tile drainage sump is located adjacent to the project levee and the discharge is piped under the levee. This sump receives drainage from 105 acres of irrigated land immediately adjacent to the San Joaquin River. Access to the site is via the project levee from Crows Landing Road. The discharge sump is bright yellow and sits on the north side of a slough which does not discharge to the river.

Township/Range/Section: NE 1/4, NE 1/4, NW 1/4, Section 21, T6S, R9E (DWR# 6S/9E-21C)

Latitude/Longitude: Lat. 37° 24' 13"/Long. 120° 59' 09"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): Tile drainage water from 105 acres of irrigated land adjacent to the river.

Comments on factors affecting water quality and quantity at the site: Quality is expected to be degraded from that of surface water quality.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 111.1D

Site Name: Gonsalves Area Drain River Mileage: 111.1

Site description, location and access: This site is a tail water drain for an area south of Orestimba Creek. This underground pipe line goes through the levee and discharges to the San Joaquin River at River Mile 111.1. The site is located approximately 1.4 miles south of Orestimba Creek and 0.7 miles east of River Road. Access to the site is via a dirt farm road east off of River Road. This farm road is located approximately 0.6 miles north of Villa Manucha Road. There is a large concrete irrigation divider box on the east side of River Road at this River Road-farm road intersection. This concrete structure is a good land mark. Follow this farm road toward the river. The discharge point is approximately 50 yards south of the road at the levee.

Township/Range/Section: SE 1/4, NE 1/4, NE 1/4, Sec.20, T6S, R9E (DWR#6S/9E-20A)

Latitude/Longitude: Lat. 37° 24' 09"/Long. 120° 59' 43"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water from approximately 2190 acres of irrigated farm land and operational spill water from the Central California Irrigation District Main Canal. The sources of irrigation water are the CCID Main Canal and on-farm irrigation wells (see map 1b). Tail water upslope is discharged to supply lateral #31 to be reused downslope.

Comments on factors affecting water quality and quantity at the site: The water quality depends on the supply water quality. This drain is expected to carry a heavy sediment load.

Discharge Ownership and Operation: Common drain-no ownership

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 052	trace elements, standard minerals, selenium, and suspended sediments	monthly	11/86-present	CVRWQCB Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 110.5 P

Site Name: Cabral Supply Pump River Mileage: 110.5

Site description, location and access: Bright yellow diversion pump located along the eastern project levee, 0.75 miles south of August Road and 1.8 miles west of Central Avenue. Access to the site is via the project levee.

Township/Range/Section: SE 1/4, NW 1/4, SW 1/4, Section 16, T6S, R9E, (DWR # 6S/9E-16M)

Latitude/Longitude: Lat. 37° 24' 33"/Long. 120° 59' 29"

County: Stanislaus USGS Quad Map: Hatch, CA

Type of diversion and use of the water: River water is diverted for use on 159 acres of pasture.

Pump size: 40hp pump

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 110.1 P

Site Name: Sanny Pump River Mileage: 110.1

Site description, location and access: Irrigation diversion pump which sits on interior side of the levee. The small portable diversion pump lays flat on the side of the levee with a discharge pipe through the levee. The pump is located on the eastern bank project levee 0.6 miles south of the intersection of August Road and Hogin Road and 0.25 miles west of the alignment of Hogin Road. Access to the site is via the project levee.

Township/Range/Section: NW 1/4, NE 1/4, SE 1/4, Section 17, T6S, R9E, (DWR # 6S/9E-17J)

Latitude/Longitude: Lat. 37° 24' 39"/Long. 120° 59' 49"

County: Stanislaus USGS Quad Map: Hatch, CA

Type of diversion and use of the water: This 14hp pump is used to divert water for irrigation of 95 acres of corn and oats immediately adjacent to the levee.

Pump size: 14hp pump

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 110.0 P

Site Name: Lloyd Crow Pump River Mileage: 110.0

Site description, location and access: Site is located 0.8 miles east of River Road in the approximate alignment of L.B. Crow Road. Access is via a farm road from River Road. Check at the farm house.

Township/Range/Section: SE 1/4, NW 1/4, SE 1/4, Section 17, T6S, R9E, (DWR # 6S/9E-17K)

Latitude/Longitude: Lat. 37° 24' 38"/Long. 120° 59' 58"

County: Stanislaus USGS Quad Map: Hatch, CA

Type of diversion and use of the water: Pump is not presently used because of poor river water quality. Use was discontinued 4 years ago. Originally used to irrigate 200 acres of alfalfa and pasture.

Water Right Permit Number: 6393 1.2 cfs (12 months)
Pump size: 35hp (2300 gpm)

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 110.0D

Site Name: Lloyd Crow Drain River Mileage: 110.0

Site description, location and access: The site is located south of Orestimba Creek and east of River Road. This tail water drain is approximately 50 feet north of the Lloyd Crow Diversion Pump (Site# SJW 110.0P). Access to the site is via River Road to dirt farm road located approximately 1.1 miles south of Orestimba Creek. This farm road is on the south side of a fence and an open ditch. Follow this road east. The road will make a sharp turn south. This drain is located at this sharp turn on the east side of the road.

Township/Range/Section: SE 1/4, NW 1/4, SE 1/4, Section 17, T6S, R9E (DWR# 6S/9E-17K)

Latitude/Longitude: Lat. 37° 24' 38"/Long. 120° 59' 59"

County: Stanislaus USGS Quad Map: Hatch, CA

WATER SOURCE

Type and source of water being discharged (description): Irrigation tailwater from approximately 200 acres of irrigated row crops. This drainage area receives irrigation water from the Central California Main Canal and the Lloyd Crow Diversion Pump (see map 1b).

Comments on factors affecting water quality and quantity at the site: Discharge is likely to carry high sediment loads.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJW 109.7P

Site Name: Novenafarm Pump River Mileage: 109.7

Site description, location and access: This site is located 0.2 miles east of River Road and 0.2 miles south of Orestimba Creek. The diversion consists of a single pump (yellow) into a closed distribution system. Access to the site is via River Road; turn east on a farm road that meets River Road approximately 0.2 miles south of Orestimba Creek. Site is 0.2 miles east of River Road approximately 250 south of site SJW 109.7D.

Township/Range/Section: SW 1/4, SW 1/4, NE 1/4, Section 17, T6S, R9E (DWR# 6S/9E-17G)

Latitude/Longitude: Lat. 37° 24' 48"/Long. 121° 00' 07"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: San Joaquin River water diverted to use on 210 irrigated acres of row crops including beans, spinach and others.

Water Right Permit Number: Oscar & Irene Heard #13555 (4.0 cfs - 11 mos)
Pump size: 60hp 1090 Carpendes
(can pump 9cfs) Modesto, CA 95313

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 109.70

Site Name: Novenafarm Drain River Mileage: 109.7

Site description, location and access: This site is a tail water drain for an area south of Orestimba Creek and east of Highway 33. The area is long and slender, trending east-west parallel to J.D. Crow Road (see map Ia). The tail water is collected along the eastern boundary of the irrigated area and discharges just north of the Novenafarm Pumps. Access to the site is via River Road; turn east on a farm road that meets River Road approximately 0.2 miles south of Orestimba Creek. Site is 0.2 miles east of River Road.

Township/Range/Section: SW 1/4, SW 1/4, NE 1/4, Section 17, T6S, R9E (DWR# 6S/9E-17G)

Latitude/Longitude: Lat. 37° 24' 51"/Long. 121° 00' 06"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water from approximately 1020 acres of irrigated farmland. There are no known tile drainage systems in this drainage area. The sources of irrigation water are the Central California Irrigation District Main Canal, the Novenafarm Diversion Pump (Site# SJW109.7P), and possibly on-farm irrigation wells (see map Ib). Farms upslope discharge tail water to the supply lateral H-14 to be reused downslope.

Comments on factors affecting water quality and quantity at the site: Quality will reflect the irrigation source water but will carry high sediment.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 109.2 P

Site Name: Enciso Pump River Mileage: 109.2

Site description, location and access: Irrigation diversion pump which sits on the floodplain of the river. This small diversion pump is located in the floodplain of the eastern bank project levee, 0.25 miles west of the intersection of August Road and Hogin Road. Owner pulls the pump motor if the river comes up.

Township/Range/Section: NW 1/4, NE 1/4, NE 1/4, Section 17, T6S, R9E, (DWR # 6S/9E-17A)

Latitude/Longitude: Lat. 37° 25' 09"/Long. 121° 59' 52"

County: Stanislaus USGS Quad Map: Hatch, CA

Type of diversion and use of the water: River water diverted for irrigation of 90 acres of alfalfa and beans.

Water Right Permit Number:
Pump size is: 30 Hp

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 109.00

Site Name: Orestimba Creek River Mileage: 109.0

Site description, location and access: Orestimba Creek discharges into the San Joaquin River 0.9 miles due south of the Crows Landing Bridge. The discharge is by gravity flow. Access to the discharge point is very difficult because of riparian growth. The best access point is at River Road approximately 1.0 miles upstream of its discharge point. Orestimba Creek at River Road gives good access to the creek and represents runoff water quality just prior to its entrance to the San Joaquin River at Mile 109.0. The best sampling point is between the two bridges with vehicle parking available on the old bridge. This monitoring site is Site# STC019.

Township/Range/Section: SW 1/4, SW 1/4, SE 1/4, Section 8, T6S, R9E (DWR# 6S/9E-8Q)

Latitude/Longitude: Lat. 37° 25' 20"/Long. 121° 00' 09"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): The water in Orestimba Creek consists of both natural surface flow from Orestimba Creek, Crow Creek and runoff, tail water and operational spills from irrigated lands. The quantity of each in the creek will vary during the year depending upon the intensity of irrigation in the area. There are no known discharges of tile drainage water directly into the creek. however. seepage into the creek is likely. Orestimba Creek receives drainage water from approximately 6560 acres of irrigated land on the east side of the Delta Mendota Canal alone (see map 1a). The sources of irrigation water to this drainage area are the Delta Mendota Canal, the Central California Irrigation District Main Canal. Orestimba Creek, and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: Orestimba Creek carries runoff water from both natural runoff and from irrigated agriculture. It is also likely that the deep entrenchment of the creek in its lower reaches near the San Joaquin causes seepage of ground water into the creek in several reaches. The exact contribution from each factor is difficult to determine.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 019	metals, minerals, Se, and suspended sediment	monthly	10-85-present	CVRWQCB Files
West Stanislaus RCD	12	EC	monthly (May-Sept)	1978-present	WSRCD Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 108.5 P

Site Name: Souza Pump River Mileage: 108.5

Site description, location and access: Irrigation pump located on the eastern levee of the San Joaquin River approximately 0.5 miles north of August Road and 0.25 miles west of Hogin Road. Access to the site is via the eastern project levee at Crows Landing Road or via a farm road off of Hogin Road approximately 0.75 miles south of the intersection of Hogin Road and Ehrlich Road. Pump is a yellow-orange color. There are two pumps at this location.

Township/Range/Section: SE 1/4, SW 1/4, NE 1/4, Section 8, T6S, R9E, (DWR # 6S/9E-8G)

Latitude/Longitude: Lat. 37° 25' 38"/Long. 120° 59' 54"

County: Stanislaus USGS Quad Map: Hatch, CA

Type of diversion and use of the water: Irrigation water diverted for use on 350 acres of corn and oats.

Water Right Permit Number: not found
Pump #1 size is: 30 hp
Pump #2 size is: 15 hp

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 108.4P

Site Name: Victoria Main River Pump #4 River Mileage: 108.4

Site description, location and access: Site is located 0.8 miles upstream from the Crows Landing Bridge along the eastern project levee. Access is via the southeast project levee from the Crows Landing Bridge. Pumped water flows into a concrete distribution box on the interior side of the levee.

Township/Range/Section: NW 1/4, SW 1/4, NE 1/4, Section 8, T6S, R9E, (DWR ≠ 6S/8E-8G)

Latitude/Longitude: Lat. 37° 25' 46"/Long. 121° 00' 03"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: River water is diverted for irrigation of 80 acres of corn and oats on the land between the river levee and Vivian Slough.

Water Right Permit Number: 15 hp pump

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 108.1 P

Site Name: Victoria River Pump #3 River Mileage: 108.1

Site description, location and access: Site is located 0.5 miles south of the Crows Landing Bridge along the eastern project levee. Access is via the project levee from the Crows Landing Bridge. Pump is located 0.1 mile upstream of another small pump (SJE 108.0P).

Township/Range/Section: NE 1/4, SE 1/4, NW 1/4, Section 8, T6S, R9E, (DWR # 6S/8E-8F)

Latitude/Longitude: Lat. 37° 25' 45"/Long. 121° 00' 12"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: River water is diverted for irrigation of 22 acres of corn and oats on the landward side of the levee.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 108.0 P

Site Name: Victoria Floodplain Pump #2 River Mileage: 108.0

Site description, location and access: Site is located 0.4 miles south of the Crows Landing Bridge along the eastern project levee. Access is via the project from Crows Landing Bridge. Pump is located within 500 ft. of another small pump.

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 8, T6S, R9E, (DWR # 6S/8E-8F)

Latitude/Longitude: Lat. 37° 25' 50"/Long. 121° 00' 20"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water is diverted for irrigation of 8 acres of corn and pasture on lands in the immediate flood plain of the river.

Water Right Permit Number: 6467
Rights: 0.35 cfs (1 Feb-1 Nov)

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 108.0D

Site Name: Crow/Verhaegan Drainage Area River Mileage: 108.3-107.7

Site description, location and access: This drainage area is bounded on the north by Crows Landing Road, on the west by River Road, and on the south by Orestimba Creek. This area drains into the San Joaquin River between river miles 107.7 and 108.3 (see map Ia). Access to this drainage area is via River Road south from Crows Landing Road to Orestimba Creek. At Orestimba Creek, take the dirt farm road on the north bank toward the river. There are a few farm roads that intersect this road which may take you along the river bank.

Township/Range/Section: Section 8, T6S, R9E

Latitude/Longitude: N/A

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): This drainage area discharges tail water to the San Joaquin River. There are no known tile drainage systems in this area. The area consists of approximately 310 acres of irrigated land. The sources of irrigation water are the Central California Irrigation District Main Canal, on-farm irrigation wells, and possibly Orestimba Creek. an abandoned 80 acre field located immediately south of the Kelner Ranch Drain and on the river flood plain side of the levee.

Comments on factors affecting water quality and quantity at the site: The water quality will reflect the irrigation source water.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 107.2D

Site Name: Vivian Slough River Mileage: 107.2

Site description, location and access: Discharge is either pumped during high river flows or is gravity during low flow periods. The pumping station consists of 3-30 hp pumps. The site is located 500 feet south of the Crows Landing Bridge along the eastern project levee. Access to the site is via the project levee at Crows Landing Road.

Township/Range/Section: SW 1/4, NW 1/4, NW 1/4, Section 8, T6S, R8E (DWR# 6S/8E-8D)

Latitude/Longitude: Lat. 37° 25' 53"/Long. 121° 00' 41"

County: Stanislaus USGS Quad Map: Crows Landing

WATER SOURCE

Type and source of water being discharged (description): Vivian Slough receives surface runoff and irrigation tail water from several thousand acres of irrigated land. In addition several surface drains from within Turlock Irrigation District spill into the Slough.

Comments on factors affecting water quality and quantity at the site: Water quality will depend upon the amount of operational spill water and irrigation tail water that finds its way into the system.

San Joaquin River Section #14

Crows Landing Road Bridge to Patterson Bridge

SAN JOAQUIN RIVER

Section 14: Crows Landing Road Bridge to Patterson Bridge

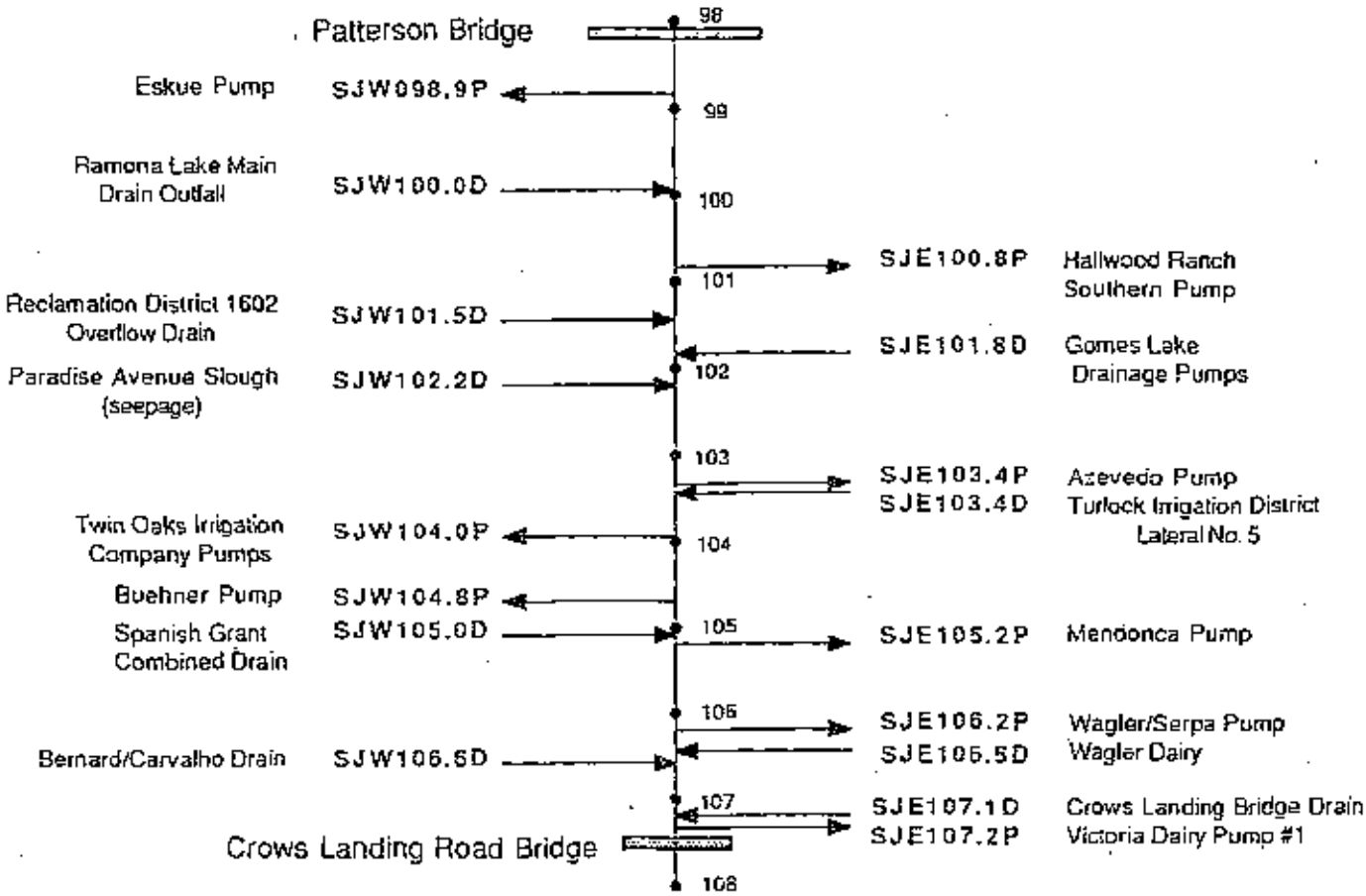


Figure A-14. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Crows Landing Road Bridge to Patterson Bridge (River Section 14).

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 107.2 P

Site Name: Victoria Dairy Pump #1 River Mileage: 107.2

Site description, location and access: Pump is located 50 feet north of the Crows Landing Bridge. Access to the site is via the project levee.

Township/Range/Section: SE 1/4, NE 1/4, NE 1/4, Section 7, T6S, R9E (DWR# 6S/8E-7A)

Latitude/Longitude: Lat. 37° 25' 55"/Long. 121° 00' 44"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: River water diverted for use on 210 acres of corn and oats on a field located on the south side of Crows Landing Road between Crows Landing Road and Vivian Slough.

Meter Number: not recorded during field survey

Water Right Permit Number: no #
Pump is a 20hp pump

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 107.1D

Site Name: Crows Landing Bridge Drain River Mileage: 107.1

Site description, location and access: This is a flood relief drain in the eastern levee approximately 250 feet north of the Crows Landing Bridge. Access to the site is via the eastern bank project levee at the Crows Landing Bridge.

Township/Range/Section: SE 1/4, NE 1/4, NE 1/4, Section 7, T6S, R9E (DWR# 6S/8E-7A)

Latitude/Longitude: Lat. 37° 25' 57"/Long. 121° 02' 23"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE
Type and source of water being discharged (description): Storm drainage, flood waters and irrigation tailwater.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 106.6D

Site Name: Bernard/Carvalho Drain River Mileage: 106.6

Site description, location and access: This is a tail water gravity pipeline for 250 acres of land near the intersection of Marshall Road and Crows Landing Road. The buried pipeline serves land on both sides of Marshall Road north of Crows Landing Road (see attached schematic map). Access to the discharge site. which is a buried pipe in the river bank, is via Crows Landing Road north along the western levee for approximately 0.4 miles.

Township/Range/Section: NE 1/4, NE 1/4, NW I/4, Section 7, T6S, R9E (DWR# 6S/8E-7C)

Latitude/Longitude: Lat. 37° 26' 00"/Long. 121° 01' 17"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): Irrigation tailwater from approximately 250 acres of irrigated land. This site is monitored as Site# STC053.

Comments on factors affecting water quality and quantity at the site: Discharge water is likely to carry large quantities of sediment.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 053	Standard minerals, trace elements, & selenium	monthly	6/86-present	CVRWQCB Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 106.5D

Site Name: Wagler Dairy River Mileage: 106.5

Site description, location and access: This is an illegal discharge of dairy waste over the levee through a steel pump under the levee and through a 4 inch plastic pipe over the levee. The discharge ponds on the exterior side of the levee. Access to the site is 0.4 miles north of the Crows Landing Bridge along the Eastern bank project levee.

Township/Range/Section: SE 1/4, SW 1/4, SE 1/4, Section 6, T6S, R9E (DWR# 6S/8E-6Q)

Latitude/Longitude: Lat. 37° 26' 09"/Long. 121° 01' 01"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): Dairy wastewater including wash water and manure are discharged.

Comments on factors affecting water quality and quantity at the site: The discharge is likely to contain large amounts of organic matter, animal waste and high salts.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 106.2 P

Site Name: Wagler/Serpa Pump River Mileage: 106.2

Site description, location and access: Site is located along the project east bank levee approximately 0.6 miles north of the Crows Landing Bridge at Crows Landing Road. Access to the site is via the project levee on the eastern bank of the river.

Township/Range/Section: NE 1/4, SW 1/4, SE 1/4, Section 6, T6S, R9E (DWR# 6S/8E-6Q)

Latitude/Longitude: Lat. 37° 26' 13"/Long. 121° 01' 04"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water from this pump is used to irrigate 250 acres of the Wagler property (130 acres is on the west side of the river and is not yet in irrigation) and 310 acres of the Serpa property. Cropping patterns on these lands are corn, alfalfa and pasture.

Water Right Permit Number: There are two pumps at this site. 50hp pump belongs to Manual Serpa and a 30hp pump that belongs to S. Victor Wagler.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 105.2 P

Site Name: Mendonca Pump River Mileage: 105.2

Site description, location and access: Site is located on the east bank of the river immediately west of Carpender Road where Turlock Irrigation District Lateral 5 1/2 meets Carpender Road. Access to the site is via Carpender Road along the project levee.

Township/Range/Section: SE 1/4, SW 1/4, SW 1/4, Section 31, T5S, R9E (DWR# 5S/8E-31N)

Latitude/Longitude: Lat. 37° 27' 04"/Long. 121° 01' 38"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water is diverted for irrigation of field corn and alfalfa being grown on 250 acres.

Meter Number: not recorded in field survey

Water Right Permit Number: no #

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 105.0D

Site Name: Spanish Grant Combined Drain River Mileage: 105.0

Site description, location and access: This combined drain outfall has three separate drains discharging into it# Spanish Grant' Marshall Road and Moran Road Drains. The outfall is located on the river side of the levee immediately east of the intersection of Marshal Road and River Road. Access to the site is through the abandoned dairy on River Road immediately south of Marshall Road. The three piped drains form a combined discharge into an open drain that discharges into the San Joaquin River after flowing in an old channel of the river for approximately 3/4 of a mile.

Township/Range/Section: NW 1/4, NE 1/4, NE 1/4, Section 1, T6S, R8E (DWR# 6S/8E-1A)

Latitude/Longitude: Lat. 37° 26' 38"/Long. 121° 02' 3"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): The discharge from all three individual piped drains is a combination of tile drainage and tail water/operational spill water. The tile drainage water comes from approximately 2800 acres of on-farm drainage mostly within the Spanish Grant Drainage District. The tailwater comes from drainage districts as far upslope as the California Aqueduct. The drainage area to this drain is approximately 9400 acres on the east side of the Delta Mendota Canal (see map 1a). This site is monitored as Site# STC 021. The sources of irrigation water to this drainage area are the Patterson Water District Laterals G, H, J, and K, the Central California Irrigation District Main Canal, the Delta-Mendota Canal, and on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The quality of the discharge will be influenced by the quantity of tile drainage that is entering the system. As the greatest quantity of water comes from tailwater from irrigated fields, there is likely to be a heavy sediment load in the water.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 021	Standard minerals, trace elements, Se, & suspended sediments	monthly	11/85-present	CVRWQCB Files
West Stanislaus RCD	16	EC & temperature	monthly (May-Sept)	6/78-present	WSRCD Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 104.8 P

Site Name: Buehner Pump River Mileage: 104.8

Site description, location and access: Site is located on the west bank of the San Joaquin River 500-700 feet downstream of the Spanish Grant Drain Outfall. Access to the site is via Marshall Road north onto the Project Levee. The pump was located here 25 years ago when a decision was made to located a new pump station for Twin Oaks Irrigation Company rather than build a pipeline from the main pumping station (SJW 104.0P).

Township/Range/Section: NE 1/4, NW 1/4, NE 1/4, Section 1, T6S, R8E (DWR# 6S/8E-1B)

Latitude/Longitude: Lat. 37° 26' 56"/Long. 121° 02' 09"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Irrigation water use for 180 acres of row crops (beans, tomatoes, cantaloupe) and alfalfa. Supply is periodically supplemented with well water from a deep well drilled immediately inside the project levee.

Water Right Permit Number: Water right held by Twin Oaks Irrigation Company

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 104.0 P

Site Name: Twin Oaks Irrigation Company Pumps

River Mileage: 104.0

Site description, location and access: Site is located 1500 feet east of Paradise Avenue along the project levee. Access to the site is via the project levee through locked gates. The gate keys are available with the manager on Apple Avenue.

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 36, T5S, R8E (DWR# 5S/8E-36F)

Latitude/Longitude: Lat. 37° 27' 30"/Long. 121° 02' 31"

County: Stanislaus

USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: San Joaquin River water diverted for irrigation of approximately 6200 acres within Twin Oaks Irrigation Company and Reclamation District No. 1602. The irrigation water is used for sugar beets, tomatoes, melons, wheat, alfalfa, corn, and barley.

Meter Number: There are three pumps located at this site and a deep well just inside the project levee.

Water Right Permit Number: 4237
License Number: 1064

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 103.4D

Site Name: Turlock Irrigation District Lateral No. 5 (Harding Drain) River Mileage: 103.4

Site description, location and access: Discharge is by gravity (2 discharge pipes 700 feet west of Carpender Road and 2 miles south of West Main Street. Access to the site is via project levee off of Carpender Road. During high river flows when gravity discharge is not possible, Lateral 5 flow moves north through a drain on the interior side of the levee to the USBR pumps at site SJE 101.8D.

Township/Range/Section: SE 1/4, SE 1/4, SE 1/4, Section 25, T5S, R8E (DWR# 5S/8E-25R)

Latitude/Longitude: Lat. 37° 27' 51"/Long. 121° 01' 55"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): The Turlock Irrigation District (TID) Lateral No. 5 discharges by gravity to the San Joaquin River. Water entering this lateral comes from operational spills from Laterals No. 4, 4 1/2, 5 and 5 1/2. This lateral is unlined beyond where the City of Turlock discharges municipal wastewater into this lateral. Reuse of water occurs below the City discharge, however, some of the effluent may find its way into the San Joaquin River. The district's discharge is composed mainly of operational spill water.

Comments on factors affecting water quality and quantity at the site: Quality will depend upon the amount of City wastewater and tailwater finding their way to the discharge point. Water entering this lateral comes from Laterals No. 4, 4 1/2, 5 and 5 1/2 of the Turlock Irrigation District.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 103.4 P

Site Name: Azevedo Pump River Mileage: 103.4

Site description, location and access: The Azevedo Pump is located 50 feet north of the Turlock Irrigation District Lateral No. 5 discharge (700 feet east of Carpender Road). Access to the site is via Carpender Road, 2 miles south of West Main Street.

Township/Range/Section: SE 1/4, SE 1/4, SE 1/4, Section 25, T5S, R8E (DWR # 5S/8E-25R)

Latitude/Longitude: Lat. 37° 27' 52"/Long. 121° 01' 55"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: River water is diverted for irrigation of 75 acres of land immediately adjacent to the river. This pump was removed in July 1985 due to vandalism and there are no immediate plans to replace it (as per land owner on 12/12/85).

Meter Number: 15175

License Number: 4537

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 102.2D

Site Name: Paradise Avenue Slough River Mileage: 102.2

Site description, location and access: This slough does not discharge directly to the San Joaquin River, though seepage most probably does occur. This slough is located south of Pear Slough on the east side of Paradise Avenue. Access to the site is via Apricot Avenue to Paradise Avenue. Cross Paradise Avenue and continue due east onto a dirt farm road. This slough is straight ahead on the landward side of the levee.

Township/Range/Section: SE 1/4, SE 1/4, SE 1/4, Sec. 26, T5S, R8E (DWR# 5S/8E-26R)

Latitude/Longitude: Lat. 37° 27' 56"/Long. 121° 03' 00"

County: Stanislaus USGS Quad Map: Crows Landing

WATER SOURCE

Type and source of water being discharged (description): This slough receives irrigation tail water from approximately 470 acres on both sides of Paradise Avenue. The sources of irrigation water to this drainage area are the Twin Oaks Irrigation Company Pumps and possibly on-farm irrigation wells on the Ramona Lake Slough.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 101.8D

Site Name: Gomes Lake Drainage Pumps River Mileage: 101.8

Site description, location and access: The Gomes Lake (Hailwood Ranch) Drainage Pumps are located 0.7 miles west of Carpender Road and 0.8 miles south of West Main Street. The site consists of three large discharge pumps which are used during flood periods otherwise the outlet is by gravity flow during the irrigation season. Access to the site is via project levee off of Carpender Road.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 24, T5S, R8E (DWR# 5S/8E-24N)

Latitude/Longitude: Lat. 37° 28' 54"/Long. 121° 02' 43"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): Surface runoff tailwater from irrigated land (principally pasture) and operational spill water from Turlock Irrigation District canals including land within Reclamation District 2063.

Comments on factors affecting water quality and quantity at the site: It is often reported that dairies are discharging into drains that lead to these pumps.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 101.5D

Site Name: Reclamation District 1602 Overflow Drain

River Mileage: 101.5

Site description, location and access: Site is located 0.5 miles south of Reclamation District 1602's main drain outfall at Lake Ramona. The discharge outlet is a gravity screwgate located on the land side of the levee. Access to the site is via the project levee through a locked gate where the levee meets Fig Avenue. The discharge point is 0.9 miles south of this gate.

Township/Range/Section: NE 1/4, NE 1/4, NW 1/4, Section 26, T5S, R8E (DWR# 5S/8E-26C)

Latitude/Longitude: Lat. 37° 29' 09"/Long. 121° 03' 33"

County: Stanislaus

USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): The water being discharged consists of area drainage from portions of RD 1602 and the Patterson Irrigation District. Normally this water would move out through site SJW 100.0D; however, in the event of a backup, this water would spill into this channel. This channel also carries water from field below the main drain.

Comments on factors affecting water quality and quantity at the site: Quality at this point will depend upon the amount of tile drainage water that finds its way back into the slough and the quantity of tailwater available to dilute it. Discharge quality should reflect the same quality as site SJW 100.0D.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 100.8P

Site Name: Hailwood Ranch Southern Pump River Mileage: 100.8

Site description, location and access: Pump is located 1.4 miles south of West Main Street on the eastern bank of the river along the project levee. Pump is located in an old backwater channel of the river that was created during 1982 floods. All maps show the original channel. Access to the site is via the project levee located on the southeast side of the Patterson Bridge. Proceed south along the levee for 1.4 miles. Pump is located adjacent to a large oak tree and a small cattle holding pen.

Township/Range/Section: SE 1/4, SE 1/4, NW 1/4, Section 23, T5S, R8E (DWR# 5S/8E-23F)

Latitude/Longitude: Lat. 37° 29' 10"/Long. 121° 01' 57"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water is diverted for irrigation and supplemental irrigation adjacent to the river. The pump is used to irrigate 520 acres (80% irrigated corn/winter oats-barley and 20% irrigated pasture).

Water Right Permit Number: (2.5 cfs) 40hp (one pump)

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 100.0D

Site Name: Ramona Lake Main Drain Outfall (RD 1602 Main Drain) River Mileage: 100.0

Site description, location and access: The discharge point is located approximately 3/8 miles south of Fig Avenue along the flood levee. The site is a freeflow drain; however, a pump discharge is possible during periods of high river flow. The sampling site is on the river side of the levee as the pipe exits under the levee. Access to the levee is through a locked gate where the levee meets Fig Avenue.

Township/Range/Section: NE 1/4, NE 1/4, NE 1/4, Section 23, T5S, R8E (DWR# 5S/8E-23A)

Latitude/Longitude: Lat. 37° 28' 43"/Long. 121° 04' 04"

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): The discharge at this location is by gravity; however, a full pump system is available if the river levels are too high. The discharge consists of area drainage from portions of RD 1602 and Patterson Irrigation District. This drain carries a combination of tailwater and subsurface drainage water. Tailwater drainage comes from approximately 3780 acres of irrigated lands located east of the Patterson Water District Lateral G and north of Marshall Road (see map 1a). Tile drainage systems serve an area of approximately 1830 acres (see map 1b). Each tile system serves a number of small farm plots and act much like a collector drain for the area. Each of the drainage systems flows into one of two collector drains which in turn discharge into a slough that eventually leads to the main surface drain outfall at this site. These two collector drains are monitored separately: the Pomelo Avenue Drain (STC005) and the Apricot Avenue Drain (STC006). The Ramona Lake Main Drain Outfall is monitored as Site# STC022. The sources of irrigation water to this area are the Patterson Water District Laterals F and G, the recirculation of slough water at Prune Avenue, and possibly on-farm irrigation wells.

The ponding system on the west side of the levee can feed water into this system, however, the majority of the gravity flow comes directly from field drains. Drainage water is likely to consist of both field tailwater and tile drainage water. An overflow channel can bypass water and discharge at SJW 101.5D. Overflow from Lake Ramona can also enter the discharge channel immediately east of the river levee. The discharge from Lake Ramona, however, is not likely to degrade water quality in the river as it consists primarily of river seepage that was trapped in the Slough or ground water seepage from upslope lands. It is recommended that the lake be monitored in order to assess the significance of its quality.

Comments on factors affecting water quality and quantity at the site: Quality at this point will depend upon the amount of tile drainage water that finds its way back into the slough and the quantity of tailwater available to dilute it.

MONITORING
Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 022	Standard minerals, trace elements, Se, & suspended sediments	monthly	1/86-present	CVRWQCB Files
Patterson Water District	Ramona Lake Drain	EC & suspended sediments	monthly (May-Sept)	4/86-present	PWD Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJN 099.0D

Site Name: Ash Avenue Drainage Area River Mileage: 98.8-99.5

Site description, location and access: There is no one discharge point in this drainage area. This area does not drain to any of the known discharges to the San Joaquin River. What drainage water that does reach the River is from small fields or through seepage. This area is located south of the Patterson Water District Main Canal, adjacent to the San Joaquin River (see map 1a). Access to this area is via Orange Avenue east to Ash Avenue. This drainage area is along Ash Avenue.

Township/Range/Section: Section 22, T5S, R8E

Latitude/Longitude: N/A

County: Stanislaus USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): Surface runoff and irrigation tail water from small irrigated fields. This 240 acre area has no known discharge site. Each field discharges surface runoff.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 098.9 P

Site Name: Eskue Pump River Mileage: 98.9

Site description, location and access: Pump is located 600 feet south of the Patterson Bridge along the West Bank. Access to the site is through the second homestead south of Las Palmas Blvd on the east side of Ash Avenue. The pump is located in the northern section of this 8 acre property.

Township/Range/Section: SW 1/4, NE 1/4, NW 1/4, Section 22, T5S, R8E (DWR# 5S/8E-22C)

Latitude/Longitude: Lat. 37° 29' 30"/Long. 121° 04' 41"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water is used to irrigate approximately 7 acres of pasture immediately adjacent to the river.

Meter Number: This pump is an electrical pump but the lines run along the southern boundary of the property with an underground cable to the site (per owner 12/16/85)

San Joaquin River Section #15

Patterson Bridge to Grayson Road Bridge

SAN JOAQUIN RIVER

Section 15: Patterson Bridge to Grayson Road Bridge

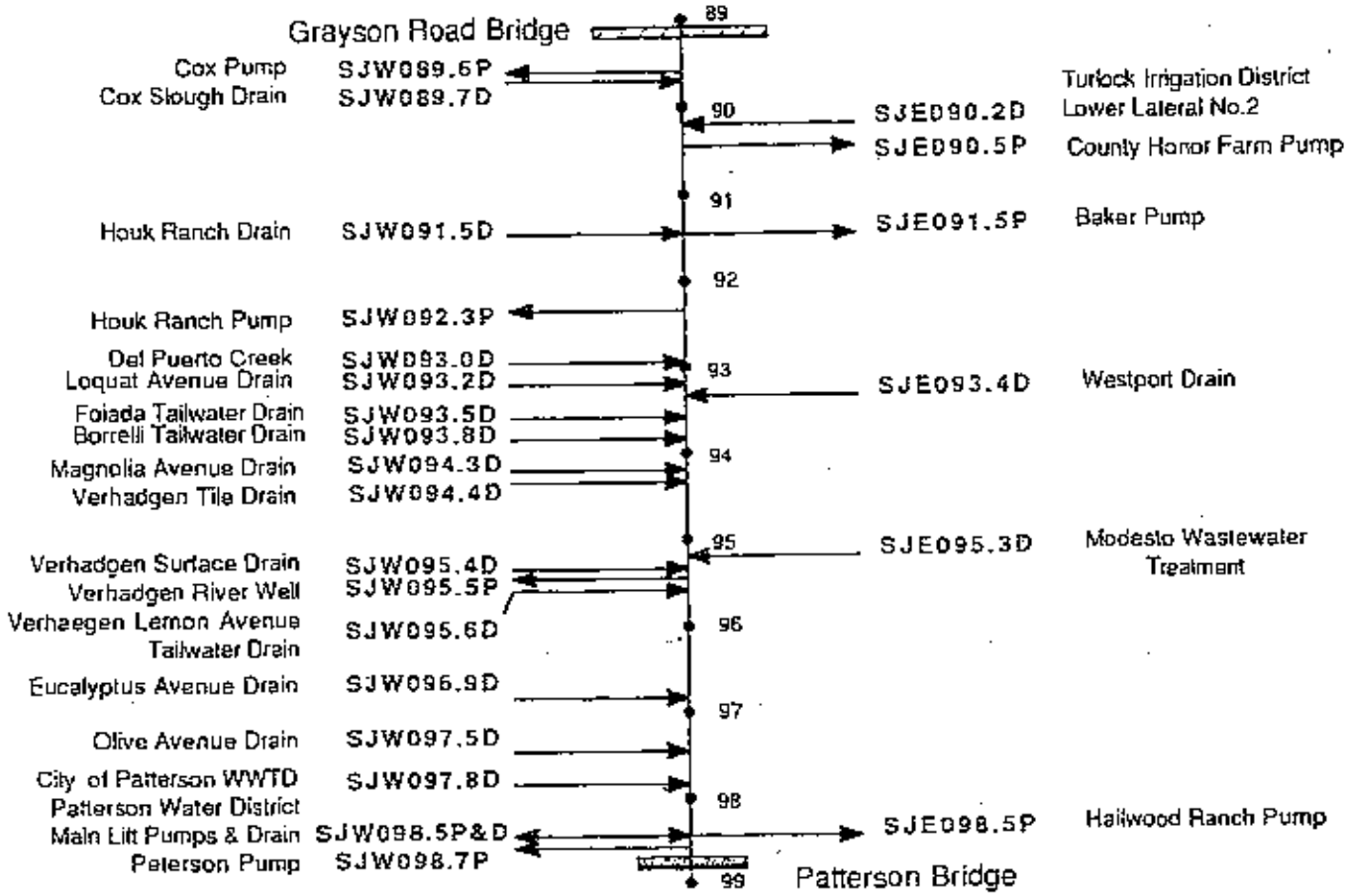


Figure A-15. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Patterson Bridge to Grayson Road Bridge (River Section 15).

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 098.7 P

Site Name: Peterson Pump River Mileage: 98.7

Site description, location and access: This small river pump is located on west bank of San Joaquin River approximately 350 feet north of the Patterson Bridge. Access to the site is via Las Palmas Avenue to Ash Road located 500 feet west of Patterson Bridge.

Township/Range/Section: SE 1/4, SW 1/4, SW 1/4, Section 15, T5S, R8E (DWR # 5S/8E-15N)

Latitude/Longitude: Lat. 37° 29' 40"/Long. 121° 04' 48"

County: Stanislaus USGS Quad Map: Crows Landing

Type of diversion and use of the water: Irrigation water for the irrigation of approximately 5 acres of pasture.

Water Right Permit Number: 16669

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 098.5 P

Site Name: Hailwood Ranch North Pump River Mileage: 98.5

Site description, location and access: The Hailwood Ranch North Pump is located 0.1 miles north of the Patterson Bridge. The Hailwood Ranch was recently purchased by the City of Modesto as part of their efforts to expand their wastewater treatment plant disposal and irrigation reuse area. Access to the site is via the project levee from its intersection with Las Palmas Avenue (West Main Street).

Township/Range/Section: SE 1/4, NW 1/4, SW I/4, Section 11, T5S, R8E (DWR # 5S/8E-11M)

Latitude/Longitude: Lat. 37° 29' 51"/Long. 121° 04' 51"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: Water is diverted for irrigation of 180 acres of irrigated pasture immediately adjacent to the river. This pump is only for supplemental supply.

Meter Number: not recorded on field survey

Water Right Permit Number: 4102
License Number: 2883

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 098.5 P

Site Name: Patterson Water District Main Lift Pumps River Mileage: 98.5

Site description, location and access: The main pumping lift for the Patterson Water District consists of two large pumps located 0.1 miles north of the Patterson Bridge. Access to the site is via Las Palmas Avenue out of Patterson for 2.4 miles; turn northeast toward the boat launch and park. The site is located 200 feet south of the Park at the River.

Township/Range/Section: NW 1/4, SW 1/4, SW 1/4, Section 15, T5S, R8E (DWR # 5S/8E-15M)

Latitude/Longitude: Lat. 37° 29' 50"/Long. 121° 04' 54"

County: Stanislaus USGS Quad Map: Crows Landing, CA

Type of diversion and use of the water: San Joaquin River Water is diverted for irrigation of 14,000 acres. Crops include alfalfa, corn, beans, tomatoes, melons, peas, spinach, apricots, walnuts, almonds, barley, wheat, oats, sudan, sugar beets, bell peppers, cherries, plums, apples, and pistachios.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 098.5D

Site Name: Patterson Water District Main Drain

River Mileage: 98.5

Site description, location and access: The Patterson Main drain as it discharges into the San Joaquin River on the north side of the Patterson Water District Main Lift Canal. Access to the site is by road on the north side of the lift canal as the road leads toward the boat launch at the San Joaquin River.

Township/Range/Section: NW 1/4, SW 1/4, SW 1/4, Section 15, T5S, R8E (DWR# 5S/8E-15M)

Latitude/Longitude: Lat. 37° 29' 50"/Long. 121° 04' 54"

County: Stanislaus

USGS Quad Map: Crows Landing, CA

WATER SOURCE

Type and source of water being discharged (description): This drain receives a combination of operational spill water from the Patterson Water District Main Lift Canal, tile drainage, tailwater, and surface runoff. The tile drainage systems are shown in map 1a. The total subsurface drainage area is approximately 1580 acres. Tailwater and surface runoff to this drain come from approximately 140 acres (see map 1b) on the north side of this drain. This site is monitored as Site# STC 023. The sources of irrigation water to this area are the Patterson Water District Laterals A, B, G, H, J, K, 3 North, and 4 North and on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The quality of water at this site is heavily influenced by the amount of tailwater that is entering the canal and the amount of operational spill water that enters the system.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 023	Standard minerals, trace elements, selenium, and Suspended Sediments	monthly	11/85-present	CVRWQCB Files
Patterson Water District	PWD Main Drain	Flow, EC, & Suspended Sediments	monthly (May-Sept)	4/86-present	PWD Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 097.8D

Site Name: City of Patterson WWTP Slough River Mileage: 97.8

Site description, location and access: The City of Patterson wastewater treatment plant discharges into a slough that enters the river at mile 97.8. During periods of no discharge the plant percolates its wastewater in ponds that are situated on the sandy soils of this slough area. Even though no surface discharge occurs, percolation seeps to the river. Access to the site is via Olive Avenue to the river. The site is located approximately 0.2 miles south of this Olive Avenue-San Joaquin River intersection.

Township/Range/Section: SE 1/4, NE 1/4, NE 1/4, Section 16, T5S, R8E (DWR# 5S/8E-16A)

Latitude/Longitude: Lat. 37° 30' 21"/Long. 121° 05' 10"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): This slough receives treated municipal wastewater, surface runoff, and tailwater from approximately 470 acres of irrigated land. The drainage area is bounded on the north by Walnut Avenue, on the south by Las Palmas Avenue, and on the west by the Patterson Water District Lateral B (see map 1a). The sources of irrigation water to this area are the Patterson Water District Laterals A and B, and possibly on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: Quality will depend upon the level of treatment achieved and on the amount of tailwater discharged to the slough.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 097.5D

Site Name: Olive Avenue Drain **River Mileage:** 97.5

Site description, location and access: This drain is a closed collector drain that flows down Olive Avenue and discharges into the San Joaquin River at Olive Avenue. The discharge is from a pipeline. Access to the site is through a farm road that begins at the end of Olive Avenue. The discharge is in a direct line with the alignment of Olive Avenue, however, the actual discharge is approximately 250 feet north of this direct line.

Township/Range/Section: NW 1/4, NE 1/4, NE 1/4, Section 16, T5S, R8E (DWR# 5S/8E-16A)

Latitude/Longitude: Lat. 37° 30' 27"/Long. 121° 05' 15"

County: Stanislaus **USGS Quad Map:** Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): The water in this closed pipeline drain is operational spill water from Patterson Water District and tailwater from irrigated fields as far up slope as the California Aqueduct. In addition, this drain also collects runoff from Salado Creek. This drain receives drainage from approximately 4840 acres of irrigated land on the east side of the Delta-Mendota Canal alone (see map 1a). This site is monitored as Site# STC 024. The sources of irrigation water to this area are West Stanislaus Irrigation District Laterals 5 and 6 South, Patterson Water District Laterals north of Main Canal, and on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The quality of this drain will reflect the quality of the tailwater that is discharged into it. No direct discharge of tile drainage water is done into the drain, however, some seepage can be expected due to high water tables in the area. The amount of seepage, however, will not greatly influence the quality.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
West Stanislaus RCD	37	EC, temperature	monthly (May-Sept)	7/78-present	WSRCD Files
CVRWQCB	STC 024	Standard minerals, trace elements, selenium, and Suspended Sediments	monthly	10/85-present	CVRWQCB Files
Patterson Water District	Olive Ave. Drain	Flow, EC, & Suspended Sediments	monthly (May-Sept)	4/86-present	RWD Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 096.9D

Site Name: Eucalyptus Avenue Drain River Mileage: 96.9

Site description, location and access: The Eucalyptus Avenue Drain is an underground pipeline which discharges directly into the San Joaquin River at the eastern end of Eucalyptus Avenue. Access is via Eucalyptus Avenue east toward the San Joaquin River. There is a trailer on the north side of the road just before reaching the river. Take the farm road on the west side of the trailer toward the north. This road will turn toward the river going behind the trailer. Once at the levee, the drain is over the bank.

Township/Range/Section: SE 1/4, NE 1/4, SW 1/4, Section 9, T4S, R8E (DWR# 4S/8E-9L)

Latitude/Longitude: Lat. 37° 31' 51"/Long. 121° 06' 43"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): The water in this closed pipeline drain is tailwater from approximately 430 acres of irrigated fields. No known tile drainage water enters the system. This drainage area is bounded on the west by Sycamore Avenue and it extends east to the San Joaquin River (see map 1a). This site is monitored as Site# STC 025. The sources of irrigation water to this drainage area are the Patterson Water District Laterals 3 North, B, and A and possibly on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The quality of this drain will reflect the quality of the tailwater that is discharged into it. No direct discharge of tile drainage water is done into the drain, however, some seepage can be expected due to high water tables in the area. The amount of seepage, however, will not greatly influence the quality.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
West Stanislaus RCD	38	EC, temperature	monthly (May-Sept)	7/78-present	WSRCD Files
CVRWQCB	STC 025	Standard minerals, trace elements, selenium, and Suspended Sediments	monthly	10/85-present	CVRWQCB Files
Patterson Water District	Eucalyptus Ave. Drain	Flow, EC, & Suspended Sediments	monthly (May-Sept)	4/86-present	RWD Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 095.6D

Site Name: Verhaegen Lemon Avenue Tail Water Drain

River Mileage: 95.6

Site description, location and access: This site is a tail water drain at the end of Lemon Avenue. Access to this site is via Lemon Avenue to the end and then continue straight ahead on a dirt farm road to the river.

Township/Range/Section: SE 1/4,NW 1/4, NW 1/4, Sec. 9, T5S, R8E (DWR# 5S/8E-9D)

Latitude/Longitude: Lat. 37° 28' 37"/Long. 121° 05' 58"

County: Stanislaus

USGS Quad Map: Brush Lake, Lake

WATER SOURCE

Type and source of water being discharged (description): Tail water from approximately 130 acres of irrigated land. This area is bounded on the west by the Patterson Water District Lateral A (see map 1a). There is no known tile drainage systems in this area. The sources of irrigation water are the Patterson Water District, Lateral A and the Verhaegen River Well (SJW095.5P).

Comments on factors affecting water quality and quantity at the site: The water quality will depend on the source water quality. This drain is expected to carry a heavy sediment load.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 095.5 P

Site Name: Verhaegen River Well River Mileage: 95.5

Site description, location and access: This is not a direct river diversion rather it is a well drilled adjacent to the San Joaquin River on the interior side of the levee. The well is located 0.4 miles north of Eucalyptus Avenue along the levee. Access is via Eucalyptus Avenue, turn north along the levee.

Township/Range/Section: NE 1/4, SW 1/4, NW 1/4, Section 9, T5S, R8E (DWR # 5S/8E-9E)

Latitude/Longitude: Lat. 37° 31' 03"/Long. 121° 05' 53"

County: Stanislaus USGS Quad Map: Brush Lake, CA

Type of diversion and use of the water: This well is used to irrigate 80 acres of land on the west side of the River. No direct river diversion occurs but significant seepage likely occurs from pumpage.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 095.4D

Site Name: Verhaegan Surface Drain River Mileage: 95.4

Site description, location and access: This is a tailwater drain which consists of an open pipe through the levee. Tailwater and surface drainage is collected from approximately 100 acres of land along the river southeast of Magnolia Avenue (see map 1a). Access to the site is via Lemon Road to the project levee. This site is approximately 0.1 miles north on the levee road. Pipe is in the levee bank but difficult to see.

Township/Range/Section: NE 1/4, NW 1/4, NW 1/4, Section 9, T5S, R8E (DWR# 5S/8E-9D)

Latitude/Longitude: Lat. 37° 31' 18"/Long. 121° 05' 55"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): Tailwater from 100 acres of irrigated land adjacent to the San Joaquin River. This area receives irrigation water from Patterson Water District Lateral A or from an on-farm irrigation well.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 095.3D

Site Name: Modesto Wastewater Treatment River Mileage: 95.3

Site description, location and access: The Modesto Wastewater Treatment Plant discharges municipal wastewater at the southern end of the treatment ponds. Access to the site is via Grayson Road to Jennings Road. Jennings Road is located 4 3/4 miles east of Laird Slough. Go south on Jennings Road for 3 1/4 miles to a dirt road on the south side of sewage disposal pond. Follow this dirt road west to levee and then go north 0.4 miles on levee to discharge site.

Township/Range/Section: SW 1/4, SE 1/4, SW 1/4, Section 4, T5S, R8E (DWR# 5S/8E-4P)

Latitude/Longitude: Lat. 37° 31' 22"/Long. 121° 05' 48"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): The discharge is composed entirely of treated municipal wastewater from the city's ponds.

Comments on factors affecting water quality and quantity at the site: Quality will be determined by the treatment level acquired.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 094.4D

Site Name: Verhaegen Tile Drain (abandoned) River Mileage: 94.4

Site description, location and access: Tile drainage sump discharging directly into the San Joaquin River. Site is located on the interior levee at the eastern most end of Magnolia Avenue.

Township/Range/Section: SE 1/4, SW 1/4, SE 1/4, Section 5, T5S, R8E (DWR# 5S/8E-5Q)

Latitude/Longitude: Lat. 37° 31' 24"/Long. 121° 07' 24"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): This discharge contains tile drainage water from 100 acres of irrigated land that lies immediately adjacent to the San Joaquin River.

Comments on factors affecting water quality and quantity at the site: Discharges will be related to the water levels in the river.

SITE ID# SJW 094.3D

Site Name: Magnolia Avenue Drain River Mileage: 94.35

Site description, location and access: This drain is an underground pipeline that runs along Magnolia Avenue east of Patterson Water District Lateral B (see map 1a). Access to this site is via Magnolia Avenue to the levee road. Magnolia Avenue turns into a dirt farm road and veers north before reaching the levee road. This drain discharges through the levee approximately 50 feet east of the Magnolia Avenue-levee road intersection before flowing into the San Joaquin River.

Township/Range/Section: NE 1/4, SW 1/4, SE 1/4, Section 5, T5S, R8E (DWR# 5S/8E-5Q)

Latitude/Longitude: Lat. 37° 31' 31"/Long. 121° 06' 29"

County: Stanislaus USGS Quad Map: Bush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): The water in this closed pipeline drain is operational spill water from Patterson Water District and tailwater from irrigated fields near Elm Avenue. The drainage area of this drain is approximately 760 acres. The Magnolia Drain receives drainage from two unconnected areas (see map 1a). The northern area is around the Magnolia Avenue-Elm Avenue and Lemon Avenue-Elm Avenue intersections and contains approximately 5700 acres. This area is bounded on the west by the Patterson Water District Lateral B. The southern area is located between Eucalyptus and Olive Avenues. It contains approximately 190 acres. The drainage water from this southern area is discharged to the Patterson Water District Lateral A to be reused or spilled to this drain. The Magnolia Drain is monitored as Site# STC 050. The sources of irrigation water to this drainage area are the Patterson Water District Laterals 3 North, B, and A and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: The quality of this drain will reflect the quality of the tail water that is discharged into it. No direct discharge of tile drainage water is done into the drain, however, some seepage can be expected due to high water tables in the area. The amount of seepage, however, will not greatly influence the quality.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 050	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, & Suspended Sediments	monthly	5/86-present	CVRWQCB Files
Patterson Water District	Magnolia Ave. Drain	Flow, EC, & Suspended Sediments	monthly (May-Sept)	4/86-present	RWD Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 093.8D

Site Name: Borrelli Tail Water Drain River Mileage: 93.8

Site description, location and access: This site is a tail water drain at the end of Fruit Avenue. Access to the discharge site is via Fruit Road to the end and then continue straight ahead toward the river on a dirt farm road. This open ditch will be on the south side of the road once past the tail water pump.

Township/Range/Section: NE 1/4, SW 1/4, NE 1/4, Sec. 5, T5S, R8E (DWR# 5S/8E-56)

Latitude/Longitude: Lat. 37° 31' 54"/Long. 121° 06' 28"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water and surface runoff from approximately 110 acres. This drainage area is south of Fruit Avenue (see map Ia). The major crop grown is sod, but some row crops are grown. The sources of irrigation water to this area are the Patterson Water District Lateral B and possibly an on-farm irrigation well(s).

Comments on factors affecting water quality and quantity at the site: The water quality and quantity depends on the amount of row crops being grown during a given growing season. The drain could carry a heavy sediment load.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 093.5D

Site Name: Foiada Tail Water Drain River Mileage: 93.5

Site description, location and access: This site is a tail water drain located between Loquat and Fruit Avenues. Access to the discharge site is via Loquat Avenue east to the project levee. The site is approximately 500 feet to the south.

Township/Range/Section: NE 1/4, SE 1/4, NW 1/4, Sec. 5, T5S, R8E (DWR# 5S/8E-5F)

Latitude/Longitude: Lat. 37° 32' 00"/Long. 121° 06' 44"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): This drain receives tail water from approximately 290 acres. This area has some row crops, but the major crop is sod. The drainage area is bounded on the west by the Patterson Water District Lateral B, on the north by Loquat Avenue, and on the south by Fruit Avenue (see map 1a). The sources of irrigation water to this area are the Patterson Water District Lateral B and on-farm irrigation wells.

Comments on factors affecting water quality and quantity at the site: The water quality and quantity will depend on the amount of row crops grown in this drainage area for a given year. The drainage could carry a high sediment load.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 093.4D

Site Name: Westport Drain River Mileage: 93.4

Site description, location and access: The Westport Drain discharges immediately north of the Modesto Irrigation Wastewater Treatment Plant Ponds. The discharge carries both tailwater and operational spill water from the Turlock Irrigation District. Access to the site is via Grayson Road to Quisenberry Road, located 3 3/4 miles east of Laird Slough Bridge. Go south on Quisenberry and the drain is about 3/4 of a mile straight ahead.

Township/Range/Section: SW 1/4, SW 1/4, SE 1/4, Section 32, T4S, R8E (DWR# 4S/8E-32Q)

Latitude/Longitude: Lat. 37° 32' 14"/Long. 121° 06' 33"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): This discharge consists of tailwater from fields within the Turlock Irrigation District and operational spill water from Turlock Irrigation District Laterals 2 1/2 and 3.

Comments on factors affecting water quality and quantity at the site: Water quality will be reflected in the quantity of operational spill waters.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 093.0D

Site Name: Del Puerto Creek River Mileage: 93.0

Site description, location and access: Del Puerto Creek at its discharge to the San Joaquin River. Access to the site is off of Loquat Avenue at the end of Cottonwood Road. The Creek is sampled upstream of this point at the end of Cottonwood Avenue (STC 026).

Township/Range/Section: SW 1/4, SE 1/4, SE 1/4, Section 31, T4S, R8E (DWR# 4S/8E-31R)

Latitude/Longitude: Lat. 37° 32' 20"/Long. 121° 07' 22"

County: Stanislaus USGS Quad Map: Brush Lake, CA

WATER SOURCE

Type and source of water being discharged (description): Del Puerto Creek receives tail water drainage from approximately 9175 acres on the east side of the Delta Mendota Canal and west of the Patterson Water District Lateral B. The creek is also an operational spill for both the West Stanislaus Irrigation and the Patterson Water Districts. In the Patterson Water District, tailwater is discharged to the irrigation laterals downslope to be reused or spilled to Del Puerto Creek. The area of drainage to Del Puerto Creek is divided by the Olive Avenue Drain drainage area because the laterals carry the drainage water north over the Olive Avenue Drain (see map 1a). No tile drainage is known to enter the creek. This site is monitored as Site# STC026. The sources of irrigation water to this drainage area are the Patterson Water District Laterals B, 3 and 4 North, and M; the West Stanislaus Irrigation District Laterals 4, 5, and 6 South. There are also some on-farm irrigation wells that supplement the water sources to this area (see map 1b).

Comments on factors affecting water quality and quantity at the site: The quality of the Creek will be related to the operational spill water quality and the quality of the tailwater leaving individual fields.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 026	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, & Suspended Sediments	monthly	1/85-present	CVRWQCB Files
West Stanislaus RCD	#41	Flow, EC	monthly (May-Sept)	7/78-present	WSRCD Files
Patterson Water District	Del Puerto Creek	Flow, EC, & Suspended Sediments	monthly (May-Sept)	4/86-present	RWD Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 092.3 P

Site Name: Houk Ranch Pump River Mileage: 92.3

Site description, location and access: San Joaquin River diversion pump immediately south of Ritchie Slough. Access to the site via the road to the Houk Ranch Drain monitoring site (STC 027) then take the project levee to the right (southeast) for 0.8 miles to the pump.

Township/Range/Section: SE 1/4, NE 1/4, NE 1/4, Section 31, T4S, R8E, (DWR # 4S/8E-31A)

Latitude/Longitude: Lat. 37° 32' 52"/Long. 121° 07' 18"

County: Stanislaus USGS Quad Map: Brush Lake

Type of diversion and use of the water: San Joaquin River water is diverted for irrigation of 300-400 acres immediately adjacent to the San Joaquin River.

Meter Number: not recorded in field survey

Water Right Permit Number:	13552	13553	4507
License Number:	4468	4469	1155

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 091.5 P

Site Name: Baker Pump River Mileage: 91.5

Site description, location and access: This site is located 0.6 miles south of Grayson Road along the eastern San Joaquin River levee at River mile 91.5. The pumps are located immediately opposite the Hoak Ranch Drain discharge (SJW 091.5D). The site is located near Brush Lake and is accessed via farm road off of Grayson Road. The dirt farm road is located approximately 1.3 to 1.5 miles east of the bridge over Laird Slough. Follow dirt road south through field to river and levee. The pump is located 700 feet south of road-levee intersection.

Township/Range/Section: NE 1/4, NW 1/4, SE 1/4, Section 30, T4S, R8E, (DWR # 4S/8E-30K)

Latitude/Longitude: Lat. 37° 33' 27"/Long. 121° 07' 36"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: San Joaquin River water is diverted for irrigation of approximately 150-200 acres of land.

Meter Number: Turlock Irrigation District 45056

Water Right Permit Number: 16662
License Number: 9816

SITE ID# SJW 091.50

Site Name: Houk Ranch Drain River Mileage: 91.5

Site description, location and access: Open drain which carries a blend of surface tailwater and subsurface tile drainage water. The drain discharge is located 1.7 miles east of Cox Road at the Houk Ranch Road. The turnoff from Cox Road is located 0.7 miles north of the intersection of Cox Road and Conduit Road. This discharge site is operated and maintained by the West Stanislaus Irrigation District.

Township/Range/Section: SE 1/4, SE 1/4, NW 1/4, Section 23, T5S, R8E (DWR# 5S/8E-23F)

Latitude/Longitude: Lat. 37° 33' 01"/Long. 121° 08' 09"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): The water in this drain is both surface tailwater and tile drainage water. The majority of the flow consist of surface tailwater from approximately 1290 acres (see map 1a). The only known discharge of tile drainage water is from approximately 80 acres of land directly adjacent to Richie Slough (see map 1b). This tile drainage discharge is monitored as Site# STC 046. This site is monitored as Site# STC 027. The sources of irrigation water to this area are the West Stanislaus Irrigation District Laterals 3 and 4 South, and on-farm irrigation wells (see map 1c).

Comments on factors affecting water quality and quantity at the site: The quality and quantity of water in the slough will be influenced heavily by the amount of tailwater entering the system. At most times, tailwater is the dominant factor. Flow in the irrigation off-season is mostly seepage and represents shallow groundwater quality.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 027	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, & Suspended Sediments	monthly	1/86-present	CVRWQCB Files
West Stanislaus Irrigation District	STC 027	EC, Suspended Sediments, & Flow	Monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 090.5 P

Site Name: County Honor Farm Pump River Mileage: 90.5

Site description, location and access: The pump is on a well at Laird Park. The well pulls water from the San Joaquin River. Access to the pump is via Grayson Road to the second entrance, east of Laird Slough bridge, into Laird Park. The pump is located in a well house just north of the Turlock Lateral No. 2.

Township/Range/Section: NW 1/4, SE 1/4, NE 1/4, Section 25, T4S, R7E, (DWR # 4S/7E-25H)

Latitude/Longitude: Lat. 37° 33' 41"/Long. 121° 08' 37"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: Water from this well is used to irrigate part of Laird Park as well as for the Honor Farm facilities year round needs.

Water Right Permit Number: 16669

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 090.2D

Site Name: Turlock Irrigation District Lateral No. 2. **River Mileage:** 90.2

Site description, location and access: The discharge site is located 0.25 miles east of the Grayson Road Bridge and 0.1 miles south of Grayson Road. Access to the site is through the Stanislaus County's Laird Park off of Grayson Road.

Township/Range/Section: NE 1/4, SW 1/4, NE 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25G)

Latitude/Longitude: Lat. 37° 33' 40"/Long. 121° 08' 42"

County: Stanislaus **USGS Quad Map:** Westley

WATER SOURCE

Type and source of water being discharged (description): The discharge is operational spill water from the Turlock Irrigation District system and normally contains excellent quality water.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 089.70

Site Name: Cox Slough Drain River Mileage: 89.7

Site description, location and access: This drain receives drainage water from a series of sloughs on the west bank of the San Joaquin River. The sloughs are located east of Cox Road and northwest of Richie Slough. Access to the site is via Cox Road south from Grayson. On Cox Road 1/4 miles south of Westley Wasteway turn left (east) onto dirt farm road across from the Del Mar processing facility. Follow this dirt road and go right at the old dairy site. Just past the farm pond take an immediate left toward the river. There will be a river pump at the river. From the pump go south. The discharge point is located approximately .3 miles south of the river pump.

Township/Range/Section: NW 1/4, SW 1/4, SE 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25Q)

Latitude/Longitude: Lat. 37° 33' 17"/Long. 121° 08' 50"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Area surface drainage that accumulates in the sloughs on west bank of San Joaquin River and tail water from approximately 290 acres of irrigated farm land (see map 1a). The drainage area is east of Cox Road and north of the Houk Ranch. The sources of irrigation water to this area are the West Stanislaus Irrigation District Lateral 2 South and on-farm irrigation well(s) (see map 1b).

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 089.6 P

Site Name: Cox River Pump River Mileage: 89.6

Site description, location and access: Single pump located 0.5 miles upstream of the Grayson Bridge. Access to the site is via Cox Road south of Grayson. Going south on Cox Road, go 1/4 mile south of Westley Wasteway and turn left on dirt farm road. This farm road will turn right at an old dairy site. Follow this road until just passed a farm pond and take an immediate left onto another dirt road. The Cox River Pump is straight down this road.

Township/Range/Section: SW 1/4, NW 1/4, SW 1/4, Section 25, T4S, R7E, (DWR # 4S/7E-25M)

Latitude/Longitude: Lat. 37° 33' 19"/Long. 121° 09' 23"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: Pumped diversion for irrigating a portion of 300 acres of farm land on river flood plain. This is a 30 HP and can pump 2000 gallons per minute. This acreage is supplied with irrigation water from two other sources; 1) 30 HP "Farm Pond Pump" with a 3000 gal/min capacity and 2) 50 HP Well Pump with a 3000 gal/min capacity. All three of these sources are used during the irrigation season. Various crops are grown depending on economy. These include beans, sugar beets, tomatoes, corn, wheat, barley, and alfalfa.

Meter Number: not recorded during field survey.

Water Right Permit Number: no number

San Joaquin River Section #16

Grayson Road Bridge to Maze Road Bridge (Highway 132)

SAN JOAQUIN RIVER

Section 16: Grayson Road Bridge to Maze Road Bridge (Hwy.132)

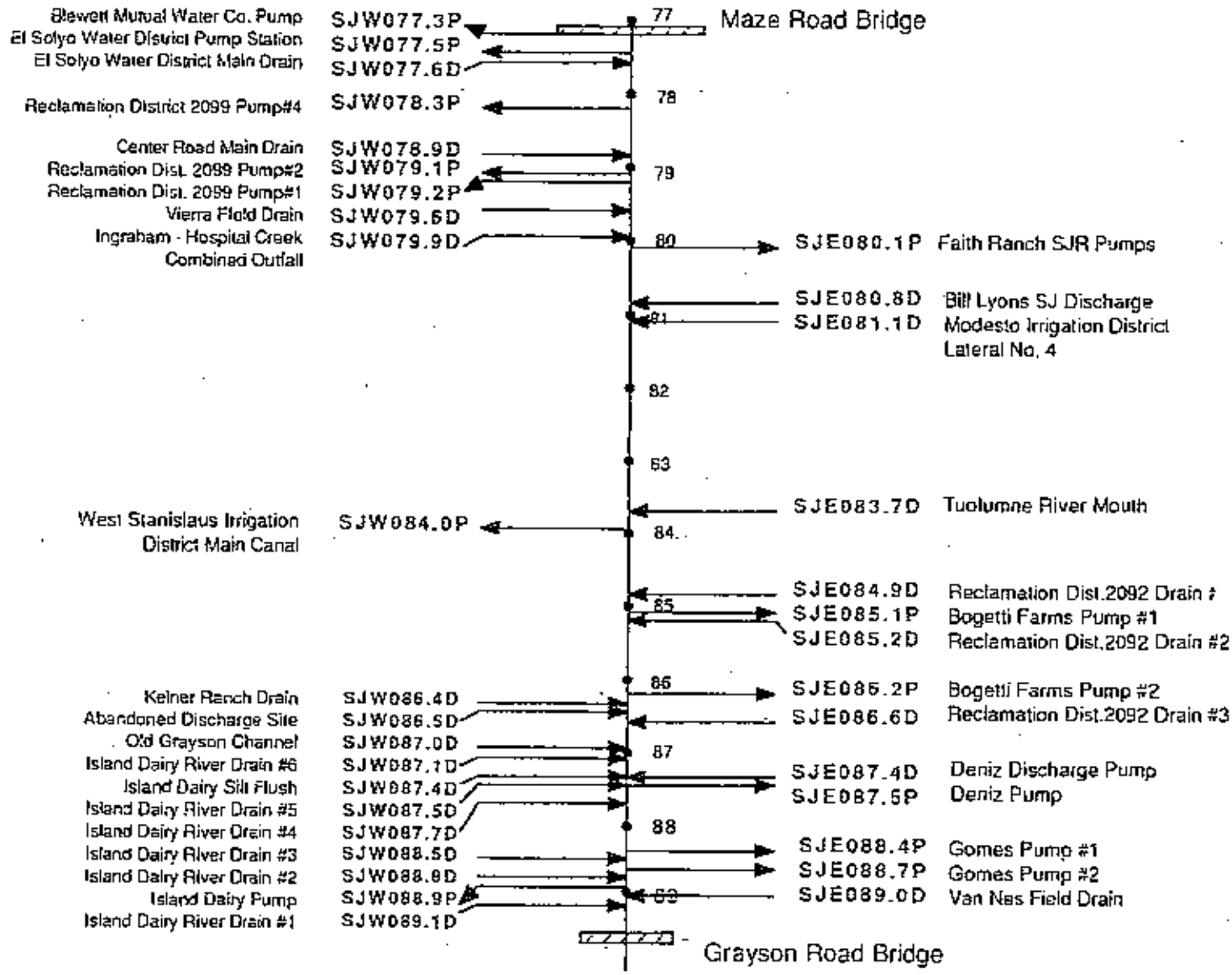


Figure A-16. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Grayson Road Bridge to Maze Road Bridge (Hwy. 132) (River Section 16).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 089.1D

Site Name: Island Dairy River Drain #1 River Mileage: 089.1

Site description, location and access: A corrugated pipe enters San Joaquin River (Laird Slough) from the west bank and the pipe discharges below the surface of the river. The pipe is located approximately 50 feet north of the Laird Slough Bridge and is accessed via Grayson Road to Island Dairy.

Township/Range/Section: SW 1/4, NE 1/4, NW 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25C)

Latitude/Longitude: Lat. 37° 33' 48"/Long. 121° 09' 05"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): This drain is closed off and no longer in use.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 089.00

Site Name: Van Nes Field Drain River Mileage: 89.0

Site description, location and access: This field tail water drain is located on the east side of the San Joaquin River (Laird Slough) approximately 200 feet north of the Laird Slough Bridge. The drainage is from a small irrigated field (approximately 25 Acres) located adjacent to the north side of Grayson Road just east of the Laird Slough bridge. Access to the site is via Grayson Road too a dirt chicken ranch road located approximately 0.2 miles east of the Laird Slough.

Township/Range/Section: SW 1/4, NE 1/4, NW 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25C)

Latitude/Longitude: Lat. 37° 33' 46"/Long. 121° 08' 58"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Irrigation tail water from 25 acre field.

Comments on factors affecting water quality and quantity at the site: Water quality but will reflect supply water quality but will carry a high sediment load.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJW 088.9P

Site Name: Island Dairy Pump River Mileage: 088.9

Site description, location and access: The pump is located on the west bank of the San Joaquin River (Laird Slough) approximately 500 feet north of the Laird Slough Bridge on Grayson Road. The pump is accessed via Grayson Road to the Island Dairy just west of the Laird Slough Bridge. There is a dirt road that circles the island along the west bank of the San Joaquin River.

Township/Range/Section: SW 1/4, NE 1/4, NW 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25C)

Latitude/Longitude: Lat. 37° 33' 52"/Long. 121° 09' 06"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: The pump has 50hp with a capacity of 15 feet/sec. This pump in combination with a well (75hp) supply water for the irrigation of corn silage and winter barley. Irrigation of approximately 275AC.

Meter Number: Turlock Irrigation District 45356

Water Right Permit Number: Not listed

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 088.8D

Site Name: Island Dairy River Drain #2 River Mileage: 088.8

Site description, location and access: The drain is a large concrete pipe which emerges from the west bank of the San Joaquin River. It is located low on the bank approximately 1100 feet (0.2 miles) north of the Grayson Road Bridge over Laird Slough. Access to the site is via Grayson Road to the Island Dairy located on the west side of the Laird Slough Bridge. There is a dirt road which circles the island along the west bank of the river.

Township/Range/Section: NW 1/4, NE 1/4, NW 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25C)

Latitude/Longitude: Lat. 37° 33' 55"/Long. 121° 09' 08"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): This is not used as a drain, but is used in the spring when the river pump (SJW 088.9P) is first started to flush the silt from the pump site. Once the pumped water is free of silt the drain is closed until the following spring. It is not used as a field drain.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJE 088.7P

Site Name: Gomes Pump #2 River Mileage: 88.7

Site description, location and access: The pump is located on the east bank of the San Joaquin River approximately 0.2 miles north of Laird Slough Bridge on Grayson Road. The site is accessed via Grayson Road to a dirt chicken ranch road located on the north side of Grayson Road approximately 0.2 miles east of the Laird Slough Bridge. The pump is at the end of this road as it veers toward the river.

Township/Range/Section: SW 1/4, SE 1/4, SW 1/4, Section 24, T4S, R7E (DWR# 4S/7E-24P)

Latitude/Longitude: Lat. 37° 34' 01"/Long. 121° 09' 06"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: Unable to reach owner for additional information.

Meter Number: Turlock Irrigation District 51921

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 088.5D

Site Name: Island Dairy River Drain #3 River Mileage: 088.5

Site description, location and access: Field tail water drain located on the west bank of the San Joaquin River 0.5 miles north of Grayson Road at Laird Slough. Access to the site is via Grayson Road to Island Dairy on the west side of Laird Slough. There is a dirt road that runs along the west bank of the river and the drain is located approximately 0.5 miles north of the Laird Slough bridge on this road.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 24, T4S, R9E (DWR# 4S/9E-24N)

Latitude/Longitude: Lat. 37° 34' 08"/Long. 121° 08' 45"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from irrigation of silage corn from an 11 acre field. The source of water is from river pump (SJW 088.9P) or farm well. Drain is gravity.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJE 088.4P

Site Name: Gomes Pump #1 River Mileage: 88.4

Site description, location and access: This orange pump is located on the east bank of the San Joaquin River 0.6 miles north of Grayson Road. The site is accessed via Grayson Road to Shiloh Road, located .7 miles east of the Laird Slough Bridge. Go north of Shiloh Road for 0.6 miles to Dos Rios Lane and then go west on Dos Rios Lane for 0.4 miles to a dirt road that goes south. Go south and then take the very next road to the right. Continue down this road to the river. The pump is about 200 feet south from the end of this farm road at the river.

Township/Range/Section: SE 1/4, NW 1/4, SW 1/4, Section 24, T4S, R9E (DWR# 4S/9E-24M)

Latitude/Longitude: Lat. 37° 34' 15"/Long. 121° 09' 20"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: Unable to reach owner to get additional information.

Meter Number: Turlock Irrigation District 42647

Water Right Permit Number: Not listed

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 087.7D

Site Name: Island Dairy River Drain #4 River Mileage: 087.7

Site description, location and access: The field tailwater drain is located on the west bank of the San Joaquin River approximately 1 mile north of the Laird Slough bridge. The site is accessed via Grayson Road to the Island Dairy on the west side of the Laird Slough Bridge. A dirt road runs north along the west bank of the river and the site is located on this road.

Township/Range/Section: SW 1/4, NW 1/4, NW 1/4, Section 24 T4S, R7E (DWR# 4S/7E-24D)

Latitude/Longitude: Lat. 37° 34' 42"/Long. 121° 09' 25"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from the irrigation of silage corn on approximately 30 acres. The drain is gravity powered. The source of irrigation water is from the river pump (SJW 088.9P) or the farm well pump.

Comments on factors affecting water quality and quantity at the site: Quality at this site will reflect irrigation supply quality but will carry heavy sediment.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJE 087.5P

Site Name: Deniz Pump River Mileage: 87.5

Site description, location and access: The irrigation pump is located on the east bank of the San Joaquin River north of Grayson Road. The pump is accessed via Grayson Road to Shiloh Road, located 0.7 miles east of Laird Slough Bridge. Go North on Shiloh Road 0.6 miles to Dos Rios Lane and southwest toward the river. The road will turn into a dirt road at the Deniz Dairy. Check in at dairy to get permission for access. Continue on dirt road (Dos Rios) to river. At river road turns right and becomes levee. The pump is located 0.5 miles north after this right turn onto the levee.

Township/Range/Section: SW 1/4, SW 1/4, SW 1/4, Section 13, T4S, R9E (DWR# 4S/9E-13R)

Latitude/Longitude: Lat. 37° 34' 53"/Long. 121° 09' 20"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: This is a 50 H.P. irrigation pump used for the irrigation of approximately 460 acres. The crops grown are determined by the economy and include corn, beans, barley, and others.

Meter Number: 34643

Water Right Permit Number: Not listed

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 087.5D

Site Name: Island Dairy River Drain #5 River Mileage: 087.5

Site description, location and access: The drain is located approximately 1.5 miles north of Grayson Road bridge over Laird Slough on the west bank of the San Joaquin River. The site is accessed via Grayson Road to Island Dairy located on the west side of the Laird Slough bridge. From the dairy there is a dirt road that runs along the west bank of the river. The site is 1.5 miles north of the bridge, just before the river makes a sharp bend to the left (west). This drain was not noticed in field survey.

Township/Range/Section: SW 1/4, SW 1/4, SW 1/4, Section 13, T4S, R7E (DWR# 4S/7E-13N)

Latitude/Longitude: Lat. 37° 34' 56"/Long. 121° 09' 21"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from irrigated silage corn. The drainage is from a 20 acre field. This is a gravity drain.

Comments on factors affecting water quality and quantity at the site: Water quality will be reflected by the source water quality and will show increased sediment content.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 087.4D

Site Name: Deniz Discharge Pump River Mileage: 87.4

Site description, location and access: The tail water discharge pump is located on the east bank of the San Joaquin River north of Grayson Road. The site is accessed via Grayson Road to Shiloh Road located 3/4 of a mile east of Laird Slough Bridge. Go north on Shiloh Road 0.6 miles to Dos Rios Lane and go west. Dos Rios Lane turns into dirt road at the Deniz Dairy. Stop at dairy to get permission for access. Continue west on dirt road toward river. At the river the road joins levee. The discharge pump is located approximately 0.4 miles north of dairy, on the levee road.

Township/Range/Section: NW 1/4, SW 1/4, SW 1/4, Section 13, T4S, R7E (DWR# 4S/7E-13N)

Latitude/Longitude: Lat. 37° 35' 01"/Long. 121° 09' 27"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): This pump is used to return seepage water back to the river at times of high water. It is a 1 H.P. pump and is only used for flood control.

Comments on factors affecting water quality and quantity at the site: Only used for flood control and would not affect water quality.

Meter Number: Turlock Irrigation District 54130

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 087.4D

Site Name: Island Dairy Silt Flush River Mileage: 087.4

Site description, location and access: The drain is used to periodically flush silt from pipes. The discharge site is located 0.3 miles upstream from the Old Grayson Channel confluence on the west bank of the San Joaquin River. The site is accessed via Grayson Road to Island Dairy located on the west side of the Laird Slough Bridge. A dirt road runs along the west bank of the river

Township/Range/Section: NE 1/4, SE 1/4, SE 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14R)

Latitude/Longitude: Lat. 37° 34' 59"/Long. 121° 09' 31"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): This drain is used to flush silt from subsurface water lines when flow gets restricted or slowed by the accumulation of silt. It is not used as a field drain.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 087.1D

Site Name: Island Dairy River Drain #6 River Mileage: 087.1

Site description, location and access: The field drain is on the west bank of the San Joaquin River located approximately 750 feet upstream of the Old Grayson Channel confluence. The site is accessed via Grayson Road to Island Dairy located on the west side of Laird Slough bridge. A dirt road circles the whole island along the west bank of the river.

Township/Range/Section: SW 1/4, SE 1/4, SE 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14R)

Latitude/Longitude: Lat. 37° 34' 52"/Long. 121° 09' 43"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tailwater from irrigation of corn grown for silage. The drained field in approximately 30 acres and the water source is from river pump (SJW 088.9P) or farm well. This is a gravity drain.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 087.0D

Site Name: Old Grayson Channel River Mileage: 87.0

Site description, location and access: This is an old Channel of the San Joaquin River. It receives a number of discharges from tail water drains and surface runoff. Each of these individual discharges is described in a separate description for the Old Grayson Channel. Access to the site is via River Road to Minnie Road in Grayson. Minnie Road ends at a gate which can be accessed. Go through the gate and follow the dirt road east. When the road splits, veer right but take the road that continues east. This road will go right by the discharge point.

Township/Range/Section: NE 1/4, NW 1/4, NE 1/4, Section 23, T4S, R7E (DWR# 4S/7E-23B)

Latitude/Longitude: Lat. 37° 34' 51"/Long. 121° 09' 50"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Surface tailwater from West Stanislaus Irrigation District and operational spill waters from West Stanislaus Irrigation District, upslope districts and the Delta Mendota Canal. There are no known tile drainage systems within the drainage area. This old channel receives drainage from approximately 8540 acres on the west side, and approximately 250 acres from Dairy Island on the east side (see map 1a). The sources of irrigation water to this drainage area are the Delta Mendota Canal, the West Stanislaus Irrigation District Laterals 2. 3, 4, 5. and 6 South. and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: The quantity of flow from each of the components will determine the effects on water quality.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 086.6D

Site Name: Reclamation District No. 2092 Drain No. 3 River Mileage: 86.6

Site description, location and access: This is a field tailwater drain located 0.2 miles upstream from the Kelner Ranch Drain Discharge (SJW 086.4D). This site is a corrugated 15" pipe which gravity flows to the river. Access to the site is via Shiloh Road which is located 0.6 miles east of the Grayson Road Bridge at Laird Slough. Go north on Shiloh Road for 0.4 miles to Dos Rios Road and go left. Follow Dos Rios Road to the end and it runs into the levee road. Go north along the levee for approximately 1 mile to a dirt road to the left down off the levee. Go down this road for 1500 feet to a dirt road too the left. Go left and the drain is located 300 feet ahead on the right.

Township/Range/Section: NE 1/4, NE 1/4, SW 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14L)

Latitude/Longitude: Lat. 37° 35' 13"/Long. 121° 10' 02"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): The discharge water is composed of surface tailwater from 80 acres of irrigated land within the river floodplain.

Comments on factors affecting water quality and quantity at the site: Discharge quantity and quality will be influenced by amount and type of irrigation on-going.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 086.5D

Site Name: Abandoned Discharge Site River Mileage: 86.5

Site description, location and access: This site is an abandoned standpipe which was originally used for the discharge of surface tailwater. The site is located on the river flood plain 0.1 miles south of the Kelner Ranch Drain Discharge. Access to the site is off of River Road approximately 0.3 miles north of Minnie Road in Grayson. This farm road goes east toward the river approximately 0.2 miles and it veers left. The discharge site is straight ahead under the tree.

Township/Range/Section: NW 1/4, NE 1/4, SW 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14L)

Latitude/Longitude: Lat. 37° 35' 12"/Long. 121° 10' 12"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Surface tailwater from an abandoned 80 acre field located immediately south of the Kelner Ranch Drain and on the river flood plain side of the levee.

Comments on factors affecting water quality and quantity at the site: Field presently abandoned.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 086.4D

Site Name: Kelner Ranch Drain River Mileage: 86.4

Site description, location and access: Open surface drain located 1.4 miles east of River Road. Access to the site is off of River Road approximately 0.85 miles north of Minnie Road in Grayson. Check with the Ranch house before entering the farm road that leads to the site. The drain exits under the levee before discharging into the San Joaquin River.

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14F)

Latitude/Longitude: Lat. 37° 35' 17"/Long. 121° 10' 15"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): This drain carries only tailwater and no known source of tile drainage water enters this drain. The tailwater is from 565 acres of irrigated land on the east side of River Road (see map 1a). The Kelner Ranch is the major source of drainage water to this drain. During the summer of 1986, tail water was rerouted away from the Kelner Ranch Drain to the Minnie Road Drain. This rerouting of tail water greatly reduced the quantity of water that flows through this drain. This site is monitored as site# STC034. The sources of irrigation water to the drainage area are the West Stanislaus Irrigation District Lateral 2 South and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: The tailwater in this drain is expected to have a very heavy sediment load.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 051	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se & Suspended Sediments	monthly	4/86-present	CVRWQCB Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 086.2 P

Site Name: Bogetti Farms Pump No. 2 River Mileage: 86.2

Site description, location and access: There are three pumps located at this site. The site is located at river mile 86.2 along the east bank levee. Access to the site is via Shiloh Road which is located 0.6 miles east of the Grayson Road Bridge at Laird Slough. Go north on Shiloh Road for 0.4 miles to Dos Rios Road and go east. Dos Rios Road goes to a dairy and then turns into a dirt road. This dirt road goes by the dairy and turns right (north) and becomes the levee road. Go north on the levee road approximately 1.3 miles to a field access road. There are two roads about 1500 feet apart. Take the second one and go toward the river. The pumps are down past the trees about 100 feet.

Township/Range/Section: NW 1/4, SE 1/4, NW 1/4, Section 14, T4S, R7E (DWR# 4S/7E-14F)

Latitude/Longitude: Lat. 37° 35' 26"/Long. 121° 10' 13"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: San Joaquin River water diverted for irrigation of approximately 1100 acres within Reclamation District No. 2092 and Bogetti Farms.

Meter Number: 1) 29386 Turlock Irrigation District
2) 60902
3) 33778

Water Right Permit Number: no #

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 085.2D

Site Name: Reclamation District 2092
Drain No. 2 (Main Drain)

River Mileage: 85.2

Site description, location and access: Reclamation District 2092 main drain discharge. Flow moves in a slough on the river side of the levee. Access is via Shiloh Road which is located 0.6 miles east of Grayson Road Bridge at Laird Slough. Go north on Shiloh Road, approximately 1.4 miles, to where it takes a 90° turn to the right. Do not turn right, continue going straight ahead onto a dirt road that goes to the Bob Bogetti Ranch house. Stop at ranch house to get permission for access. Continue on dirt road and it will eventually turn into the levee and there will be a pond on the right side of the levee. From the pond continue along the levee approximately 0.4 miles and there will be a dirt road that goes down the side of the levee to the right. This road will put you on the edge of a field. The drain is in the southeastern corner of this field.

Township/Range/Section: NE 1/4, SE 1/4, SW 1/4, Section 11, T4S, R7E (DWR# 4S/7E-11P)

Latitude/Longitude: Lat. 37° 35' 52"/Long. 121° 10' 08"

County: Stanislaus

USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Discharge consists of a combination of tailwater and tile drainage water. The tile drainage water comes from 200 acres of tile drainage within Reclamation District 2092. Tailwater comes from both Reclamation District 2092 and Turlock Irrigation District.

Comments on factors affecting water quality and quantity at the site: Water quality will be affected by the proportion of tailwater and the drainage water.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 085.1 P

Site Name: Bogetti Farms Pump No. 1 River Mileage: 85.1

Site description, location and access: First river diversion pump south of the Tuolumne River. Access is via Shiloh Road which is located 0.6 miles east of Grayson Road Bridge at Laird Slough. Go north on Shiloh Road until it makes a turn to the right. Do not turn right. Go straight ahead onto a dirt road to Bob Bogetti's ranch house. Stop at the ranch house to O.K. access. Continue on dirt road and it will turn into the levee. There will be a pond on the right side of levee. From the pond continue on the levee road for approximately 0.4 miles and take a dirt road to the right going down the side of the levee. This road will put you on the eastern edge of a field and the pump is located in the southeastern corner of this field on the river.

Township/Range/Section: SE 1/4, NE 1/4, SW 1/4, Section 11, T4S, R7E (DWR# 4S/7E-11H)

Latitude/Longitude: Lat. 37° 35' 54"/Long. 121° 10' 08"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: River Water diverted for irrigation.

Meter Number: 60 901

Water Right Permit Number: not listed

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 084.9D

Site Name: Reclamation District 2092
Drain No. 1

River Mileage: 84.9

Site description, location and access: Tailwater drain that discharges surface runoff from 150 acres of river flood plain irrigated land. Access to the site is via Shiloh Road which is located 0.6 miles east of Grayson Road Bridge at Laird Slough. Go north on Shiloh Road for approximately 1.4 miles and then continue straight onto dirt road. This dirt road will veer to the west going past Bob Bogetti's ranch house. Stop at the ranch house to O.K. access. Continue on the dirt road and it will turn into the levee road. There will be a pond on the right side of levee. From pond continue approximately 0.4 miles along levee to another dirt road that veers to the right going down the side of the levee. This will take you to a field and the drain is on the south end of field right next to the river.

Township/Range/Section: NE 1/4, NW 1/4, SW 1/4, Section 11, T4S, R7E
(DWR# 4S/7E-11M)

Latitude/Longitude: Lat. 37° 36' 03"/Long. 121° 10' 17"

County: Stanislaus

USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Surface tailwater from 150 acres of irrigated land.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 084.0 P

Site Name: West Stanislaus I.D. Main Canal River Mileage: 84.0

Site description, location and access: This is a major pump lift station for diversion of 76,000 acre-feet of water annually for irrigation of 24,800 acres. In addition it is the intake supply canal for RD 2100 (1500 acres), White Lake Mutual Water Company (1200 acres) and RD 2102 (500 acres). Access: Go west on West Stanislaus Road all the way to the end and veer right to levee on north bank of canal. The dike and pumps are approximately 0.2 miles ahead. West Stanislaus Road is located approximately 1.4 miles north of Grayson off of River Road.

Township/Range/Section:
SW 1/4, SE 1/4, NE 1/4, Section 10, T4S, R7E (DWR# 4S/7E-10H)
SE 1/4, SW 1/4, NE 1/4, Section 10, T4S, R7E (DWR# 4S/7E-10G)

Latitude/Longitude: Lat. 37° 36' 07"/Long. 121° 10' 50"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: San Joaquin River Water is being diverted for irrigation of 24,800 acres. There are three other major diverters from the canal. Crops grown include beans, apricots, walnuts, tomatoes, melons, almonds, onions, cauliflower, peppers, alfalfa, wheat, barley, and cherries.

Meter Number: not recorded on field survey

Water Right Permit Number: 1987 or 1978

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 083.7D

Site Name: Tuolumne River River Mileage: 83.7

Site description, location and access: Tuolumne River inflow to the San Joaquin River.

Township/Range/Section: SE 1/4, NW 1/4, NW 1/4, Section 11, T4S, R7E (DWR# 4S/7E-11D)

Latitude/Longitude: Lat. 37° 36' 22"/Long. 121° 10' 21"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Natural surface runoff from the Tuolumne River Watershed.

Comments on factors affecting water quality and quantity at the site: Quality will vary with flow and the proportion of return flows in the river.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 081.1D

Site Name: Modesto Irrigation District Lateral No. 4 River Mileage: 81.1D

Site description, location and access: The discharge is located on east bank of the San Joaquin River, 0.5 miles south of Old Fishermans Club off Hwy 132. Old Fishermans Club is located approximately 2.2 miles east of Hwy 132 bridge.

Township/Range/Section: NE 1/4, NE 1/4, SW 1/4, Section 34, T3S, R7E (DWR# 3S/7E-34L)

Latitude/Longitude: Lat. 37° 37' 50"/Long. 121° 11' 20"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): Two sources: 1) operational spill from the Modesto Irrigation District Lateral No. 4 and 2) surface drainage from irrigated fields on east bank south of discharge point.

Comments on factors affecting water quality and quantity at the site: Water quality will reflect the proportion of operational spill water from the Modesto Irrigation District (MID) Lateral No. 4 and the surface drainage that enters after the MID boundary.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
Modesto Irrigation District	MID Lateral No. 4	Flow	monthly	4/86-present	MID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 080.8D

Site Name: Bill Lyons San Joaquin Discharge River Mileage: 80.8

Site description, location and access: Area drain located on east bank of the San Joaquin River. This gravity drain is located on river side of levee approximately 250 feet south of last skeet pad at the Old Fishermans Club. The road to Old Fishermans Club is located 2.2 miles east of Hwy 132 bridge on the right hand side.

Township/Range/Section: NE 1/4, SW 1/4, NW 1/4, Section 34, T3S, R7E (DWR# 3S/7E-34E)

Latitude/Longitude: Lat. 37° 38' 08"/Long. 121° 11' 26"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): The source is surface drainage water from irrigated fields on landward side of levee. Discharge site is part of the drainage system for Reclamation District 2031.

Comments on factors affecting water quality and quantity at the site: Quality will reflect surface irrigation water quality. The source of water in this area is both San Joaquin River and Modesto Irrigation District.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 080.1P

Site Name: Faith Ranch San Joaquin River Pumps

River Mileage: 80.1

Site description, location and access: Two irrigation pumps located on the east bank of the San Joaquin River approximately 1.6 miles east of Hwy 132 bridge on Hwy 132. The water is pumped from the San Joaquin River and piped under Hwy 132 to fields north of Hwy 132. One pump is a 30 Hp pump and the larger orange pump is 75 hp pump.

Township/Range/Section: SW 1/4, SW 1/4, SE 1/4, Section 28, T3S, R7E (DWR# 3S/7E-28Q)

Latitude/Longitude: Lat. 37° 38' 17"/Long. 121° 12' 07"

County: Stanislaus

USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation within the Faith Ranch and Reclamation District 2031. Water is used on 500-600 acres of irrigated pasture. The ranch attempts to irrigate this each year.

Meter Number: Modesto Irrigation District P418-7

Water Right Permit Number: no #

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 079.9D

Site Name: Ingram-Hospital Creek Combined Outfall

River Mileage: 79.9

Site description, location and access: This outfall is a major west side drain that receives surface tailwater, storm water and tile drainage from a large irrigated area upslope. The discharge point is south of Maze Road on the west side of the San Joaquin River. Access to the site is via project and nonproject levees.

Township/Range/Section: NE 1/4, NE I/4, NW I/4, Section 33, T3S, R7E (DWR# 3S/7E-33C)

Latitude/Longitude: Lat. 37°38' 11"/Long. 121°12' 14"

County: Stanislaus

USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): This drain serves as a major area surface drain receiving tile drainage water and surface tailwater from West Stanislaus Irrigation District, RD 2100, RD 2099 and other water districts. Flows of tailwater come from irrigated fields in the West Stanislaus Irrigation District and tile drainage water from scattered tile drains within the area closest to the river (East of Highway 33 and mostly east of River Road). This drain receives surface drainage from approximately 13,195 acres. Within the service area there are approximately 2290 acres of tile drainage systems. The flows come from:

1. White Lake Mutual-Hagemann Ranch Main Drain: This is the main drain that discharges all the surface drainage from approximately 2955 acres within White Lake Mutual Water Company and Reclamation District 2100 (Hagemann Ranch) lands (see map 1a). The drain receives subsurface drainage from approximately 1265 acres (see map 1b). The site is located in the north east corner of the ranch. Access is to proceed east off of River Road for 3.7 miles on the Main Canal Road, then proceed north on the levee road for 1.6-1.7 miles to the main pumping station. This drain is monitored as site# STC036. The source of irrigation water is from the West Stanislaus Irrigation District Main Canal and on-farm irrigation wells (see map 1c).

2. Hagemann Ranch Southern Drain P#mp: This drain receives surface drainage from approximately 335 acres on the river side of the project levee. The area also has a subsurface drainage system for approximately 185 acres. This drain is monitored as site# STC035. This discharge is to a slough leading to River mile 79.9. Access to the site is through the Hagemann Ranch. Proceed east off of River Road 3.7 miles on the Main Canal Road, then proceed north on the levee road for 0.9 miles to the pumping station. The source of irrigation water to this area is the West Stanislaus Irrigation District Main Canal.

3. Hospital-Ingram Creek Combined flow at Vierra Dairy: The water in the combination of Hospital and Ingram Creek is mostly surface tailwater from

approximately 9900 acres (see map 3a). The drain also receives tile drainage from approximately 840 acres of farm land on the east side of Highway 33 (see map 3b). Hospital Creek receives surface drainage from 2960 acres and Ingram Creek from 6950 acres, but does contain tile drainage water from a significant portion of irrigated land. A monitoring site is located on the River Bank Road 1/2 mile east of the Vierra Dairy (STC 037). Site access is east off of River Road on Dairy Road. Proceed past the Vierra Dairy then turn south for 1/4 mile then turn east on the northern levee of the combined Ingram and Hospital Creek. Sampling site is 1/2 mile from the Dairy just prior to the turn in the levee at the large Oak tree. The irrigated land within the drainage areas of Hospital and Ingram Creeks receive supply water from the Delta Mendota Canal, the West Stanislaus Irrigation District Laterals 3, 4, 5, and 6 north, and on-farm irrigation wells (see map 3c).

Comments on factors affecting water quality and quantity at the site: Water quality at this site will be reflected in the proportion of tailwater and tile drainage water at these sites.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 037	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se & Suspended Sediments	monthly	11/85-present	CVRWQCB Files
West Stanislaus Irrigation District	STC 037	EC, Suspended Sediments, Flow	monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 079.9D

Site Name: Ingram-Hospital Creek Combined Outfall

River Mileage: 79.9

Site description, location and access: This outfall is a major west side drain that receives surface tailwater, storm water and tile drainage from a large irrigated area upslope. The discharge point is south of Maze Road on the west side of the San Joaquin River. Access to the site is via project and nonproject levees.

Township/Range/Section: NE 1/4, NE I/4, NW I/4, Section 33, T3S, R7E (DWR# 3S/7E-33C)

Latitude/Longitude: Lat. 37°38' 11"/Long. 121°12' 14"

County: Stanislaus

USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): This drain serves as a major area surface drain receiving tile drainage water and surface tailwater from West Stanislaus Irrigation District, RD 2100, RD 2099 and other water districts. Flows of tailwater come from irrigated fields in the West Stanislaus Irrigation District and tile drainage water from scattered tile drains within the area closest to the river (East of Highway 33 and mostly east of River Road). This drain receives surface drainage from approximately 13,195 acres. Within the service area there are approximately 2290 acres of tile drainage systems. The flows come from:

1. White Lake Mutual-Hagemann Ranch Main Drain: This is the main drain that discharges all the surface drainage from approximately 2955 acres within White Lake Mutual Water Company and Reclamation District 2100 (Hagemann Ranch) lands (see map 1a). The drain receives subsurface drainage from approximately 1265 acres (see map 1b).The site is located in the north east corner of the ranch. Access is to proceed east off of River Road for 3.7 miles on the Main Canal Road, then proceed north on the levee road for 1.6-1.7 miles to the main pumping station. This drain is monitored as site# STC036. The source of irrigation water is from the West Stanislaus Irrigation District Main Canal and on-farm irrigation wells (see map 1c).

2. Hagemann Ranch Southern Drain P#mp: This drain receives surface drainage from approximately 335 acres on the river side of the project levee. The area also has a subsurface drainage system for approximately 185 acres. This drain is monitored as site# STC035. This discharge is to a slough leading to River mile 79.9. Access to the site is through the Hagemann Ranch. Proceed east off of River Road 3.7 miles on the Main Canal Road, then proceed north on the levee road for 0.9 miles to the pumping station. The source of irrigation water to this area is the West Stanislaus Irrigation District Main Canal.

3. Hospital-Ingram Creek Combined flow at Vierra Dairy: The water in the combination of Hospital and Ingram Creek is mostly surface tailwater from

approximately 9900 acres (see map 3a). The drain also receives tile drainage from approximately 840 acres of farm land on the east side of Highway 33 (see map 3b). Hospital Creek receives surface drainage from 2960 acres and Ingram Creek from 6950 acres, but does contain tile drainage water from a significant portion of irrigated land. A monitoring site is located on the River Bank Road 1/2 mile east of the Vierra Dairy (STC 037). Site access is east off of River Road on Dairy Road. Proceed past the Vierra Dairy then turn south for 1/4 mile then turn east on the northern levee of the combined Ingram and Hospital Creek. Sampling site is 1/2 mile from the Dairy just prior to the turn in the levee at the large Oak tree. The irrigated land within the drainage areas of Hospital and Ingram Creeks receive supply water from the Delta Mendota Canal, the West Stanislaus Irrigation District Laterals 3, 4, 5, and 6 north, and on-farm irrigation wells (see map 3c).

Comments on factors affecting water quality and quantity at the site: Water quality at this site will be reflected in the proportion of tailwater and tile drainage water at these sites.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 037	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se & Suspended Sediments	monthly	11/85-present	CVRWQCB Files
West Stanislaus Irrigation District	STC 037	EC, Suspended Sediments, Flow	monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 079.6D

Site Name: Vierra Field Drain River Mileage: 79.6

Site description, location and access: The field drain is located on the west bank of the San Joaquin River south of Maze Road. Access is via Dairy Road to the levee. Go north on levee to river and turn right on non-project levee to irrigated field. The drain is on the west side of field.

Township/Range/Section: SE 1/4, SW 1/4, NW 1/4, Section 33, T3S, R7E (DWR# 3S/7E-33E)

Latitude/Longitude: Lat. 37° 37' 55"/Long. 121° 12' 30"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): Field tail water drain that serves irrigated area on river flood plain. The total acreage is 40 acres of irrigated land. The water source for this site is the diversion pump at site SJW 079.2P (Reclamation District No. 2099 Pump No. 1).

Comments on factors affecting water quality and quantity at the site: Water quality will reflect diverted river water quality except for increase sediment load.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 079.2 P

Site Name: Reclamation District No. 2099 Pump No. 1 River Mileage: 79.2

Site description, location and access: The diversion pump is located on west bank of the San Joaquin River. South of Maze Road. The site is accessed via Dairy Road to the project levee. Site is located 0.1 miles south of site SJW 079.1P.

Township/Range/Section: SE 1/4, NW 1/4, SW 1/4, Section 33, T3S, R7E (DWR# 3S/7E-33M)

Latitude/Longitude: Lat. 37° 37' 39"/Long. 121° 12' 33"

County: Stanislaus USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation of 185 acres of land within Reclamation District No. 2099.

Meter Number: 351479

Water Right Permit Number: no #

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 079.1 P

Site Name: Reclamation District No. 2099
Pump No. 2

River Mileage: 79.1

Site description, location and access: The diversion pump is located south of Maze Road on the west bank of the San Joaquin River. The pump diverts water from the San Joaquin River to a irrigation ditch on landward side of levee. The pump supplies water to 134 acres within Reclamation District No. 2099. Access to the site is via River Road, 1.8 miles south from Maze Road. Go east on Center Road (it is a dirt road in this direction) to the levee road. The pump is located approximately 0.5 miles south on the levee road.

Township/Range/Section: NW 1/4, SW 1/4, SE 1/4, Section 32, T3S, R7E
(DWR# 3S/7E-33N)

Latitude/Longitude: Lat. 37° 37' 36"/Long. 121° 12' 43"

County: Stanislaus

USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation of 134 acres within Reclamation District No. 2099.

Meter Number: T92212 (PG&E)

Water Right Permit Number: 1476 (El Solyo Water District)
License Number: 1280

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 078.9D

Site Name: Center Road Main Drain River Mileage: 78.9

Site description, location and access: The discharge pump is located on the west bank of the SJR approximately 1.2. miles south of Maze Road. The pump is accessed by going south on River Road approximately 2 miles to Center Road, turn east. At the end of Center Road veer left to levee. The discharge pump is located on landward side on non-project levee near river 50 feet north of project levee.

Township/Range/Section: SE 1/4, NE 1/4, SE 1/4, Section 32, T3S, R7E (DWR# 3S/7E-32J)

Latitude/Longitude: Lat. 37° 37' 43"/Long. 121° 12' 50"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): Tail water and tile drainage water from irrigated land within El Solyo Water District and Reclamation District No. 2099. Inflow consists of tail water from approximately 1220 acres (see map 1a) and tile drainage from approximately 100 acres in Reclamation District No. 2099 only (see map 1b). This site is monitored as site# STC043. The sources of irrigation water to this area are the El Solyo Water District Pump and from Reclamation District No. 2099, pumps 1,2, and 4 (see map 1c).

Meter Number: ZT4588 (PG&E)

Comments on factors affecting water quality and quantity at the site: Water quality will depend on the amount of tailwater being discharged. The pump is an emergency outlet when river levels are high otherwise all discharges are by gravity flow.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 043	Ca, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, & Suspended Sediments	monthly	12/85-present	CVRWQCB Files
West Stanislaus Irrigation District	STC 037	EC, Suspended Sediments	monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 078.3 P

Site Name: Reclamation District No. 2099 Pump No. 4 River Mileage: 78.3

Site description, location and access: The diversion pump is located 250 feet north of DWR gaging station on the west bank of the San Joaquin River and 200 feet south of the Hetch Hetchery Aqueduct River crossing south of Maze Road. Pump accessed via dirt road that runs parallel Hetch Hetchery Aqueduct. To reach this dirt road go south on River Road from Maze Road approximately 1.3. miles to Orchard Road, turn east. Continue to the end of Orchard Road and veer left and then right on to the dirt road going toward river. This road ends at the levee and the pump is 300 feet south of intersection.

Township/Range/Section: SW 1/4, NE 1/4, NE 1/4, Section 32, T3S, R7E (DWR# 3S/7E-32A)

Latitude/Longitude: Lat. 37° 38' 08"/Long. 121° 12' 58"

County: Stanislaus USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation of 179 acres within Reclamation District No. 2099.

Meter Number: 2T4588 (PG&E)

Water Right Permit Number: no #

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 077.60

Site Name: El Solyo Water District Main Drain River Mileage: 77.6

Site description, location and access: The discharge pump is located on the west side of the San Joaquin River 900 feet south of Maze Road. The pump is located on the landward side of the levee with a pipe going through the levee. Access: on River Road go .3 miles south of Maze Blvd. and take a left turn on a dirt road. This dirt road turns south at the river. The first turn to the left past the El Solyo Water District will be the levee. The levee will make a 90° turn to the right at the treeline and the discharge is right there. The pump is located 400 feet south of the El Solyo Water District Main Pumping station.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 29, T3S, R7E (DWR# 3S/7E-29N)

Latitude/Longitude: Lat. 37° 38' 22"/Long. 121° 13' 40"

County: Stanislaus USGS Quad Map: Ripon, CA

Meter Number: 2T4588

WATER SOURCE

Type and source of water being discharged (description): This discharge receives tailwater from approximately 690 acres of irrigated land within El Solyo Water District and the Manuel Vierra Dairy during the irrigation season and surface runoff from the same acreage during the wet season. The pump is used during high water in the river. It is gravity flow during low water periods. In addition the discharge point receives tile drainage from approximately 325 acres of land within the El Solyo Water District. This site is monitored as site# STC044. The source of irrigation water to this area is the El Solyo Water District Main Canal.

Comments on factors affecting water quality and quantity at the site: Tile drainage from 325 acres of land within the El Solyo Water District also will affect water quality depending upon the amount of tailwater blended in.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 044	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, & Suspended Sediments	monthly	11/85-present	CVRWQCB Files
West Stanislaus Irrigation District	STC 044	EC, Suspended Sediments	monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 077.5 P

Site Name: El Solyo Water District Pumping Station

River Mileage: 77.5

Site description, location and access: The pumping station is located on the west bank of San Joaquin River 500 feet south of Maze Road. The pumping station consists of 1-50 hp pump, 1-100 hp pump and 3-75 hp pumps.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 29, T3S, R7E (DWR# 3S/7E-29N)

Latitude/Longitude: Lat. 37° 38' 23"/Long. 121° 13' 42"

County: Stanislaus

USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation of 3700 acres within the El Solyo Water District.

Meter Number: 3T1979 (PG&E)

Water Right Permit Number: 1476
License Number: 1280

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 077.4D

Site Name: Blewett Drain River Mileage: 77.4

Site description, location and access: This drain discharges to the San Joaquin River from the west bank approximately 300 feet south of Maze Boulevard. This drain runs parallel to and along the north side of the El Solyo canal. The discharge site is located between the El Solyo and Blewett pumping stations.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 29, T3S, R7E (DWR# 3S/7E-29N)

Latitude/Longitude: Lat. 37° 38' 26"/Long. 121° 13' 41"

County: Stanislaus USGS Quad Map: Ripon, Ca

WATER SOURCE

Type and source of water being discharged (description): This drain carries only irrigation tailwater and operational spill water from the West Stanislaus Irrigation District. No tile drainage is known to enter this drain. This drain receives drainage from approximately 3400 acres. The area is bounded on the north by Highway 132 and Blewett Road, and on the south by the El Solyo Canal (see map 1a). This site is monitored as Site# STC 051. The irrigation water supply to this area comes from West Stanislaus Irrigation District Laterals 4, 5, and 6 North.

Comments on factors affecting water quality and quantity at the site: The tailwater in this drain is expected to have a high sediment load.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 051	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, & Suspended Sediments	monthly	5/86-present	CVRWQCB Files
West Stanislaus Irrigation District	Blewett Drain	EC & Suspended Sediments	Monthly (May-Sept)	4/86-present	WSID Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 077.3 P

Site Name: Blewett Mutual Water Co. Maze Road Pump-South

River Mileage: 77.3

Site description, location and access: The diversion pump is located on the west bank of San Joaquin River 400 feet south of Maze road. This structure is 100 feet north of the El Solyo pumping station intake and can be accessed via dirt road perpendicular to levee and river.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 29, T3S, R7E (DWR # 3S/7E-29N)

Latitude/Longitude: Lat. 37° 38' 27"/Long. 121° 13' 42"

County: Stanislaus

USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion for irrigation of 1100 acres of land located north of the El Solyo Water District main lift canal and south of Maze Road (Highway 132). Crops grown include wheat, tomatoes, alfalfa, sugar beets, and lima beans.

Meter Number: Not recorded - this site was missed on field investigation.

Water Right Permit Number: 1195

San Joaquin River Section #17

Maze Road Bridge (Highway 132) to Airport Way (Vernalis)

SAN JOAQUIN RIVER

Section 17: Maze Road Bridge (Hwy.132) to Airport Way (Vernalis)

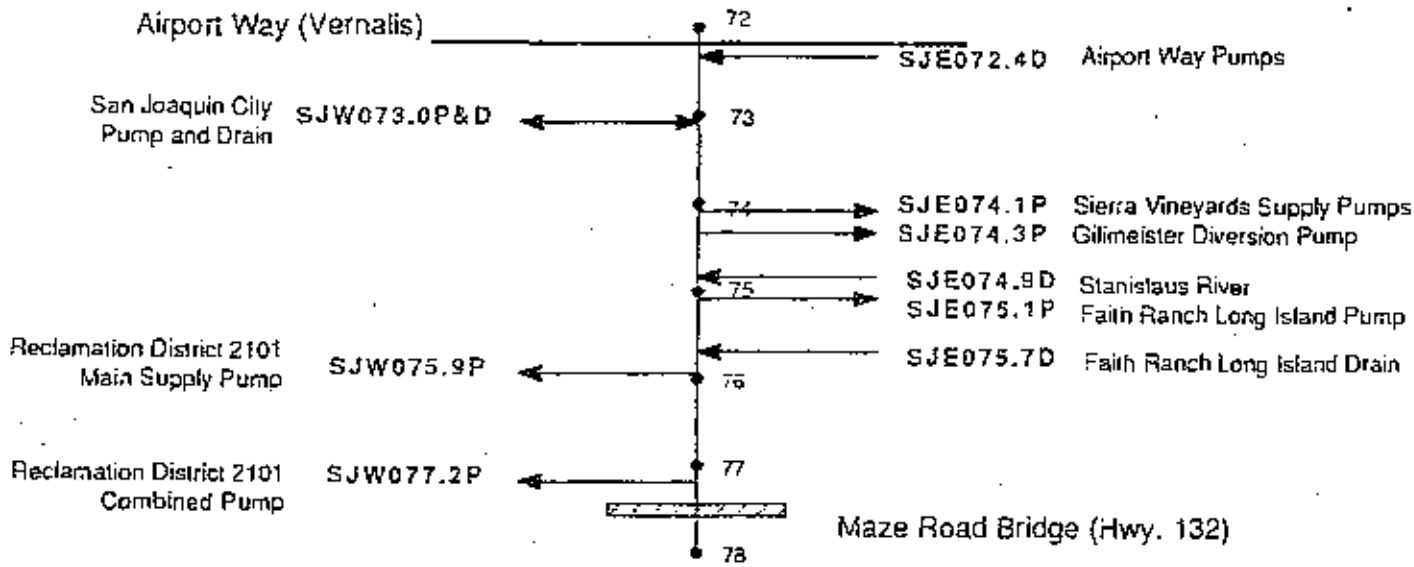


Figure A-17. Schematic Diagram for Water Diversions and Discharges on theSan Joaquin River from Maze Road Bridge (Hwy. 132) to Airport Way (Vernalis) (River Section 17).

SITE ID# SJE 072.4D

Site Name: Airport Way Pumps River Mileage: 72.4

Site description, location and access: Two surface water discharge pumps are located on the east bank of the San Joaquin River approximately 400 feet south of Airport Way. The pumps are on the landward side of the levee with 15"+ diameter discharge lines through the levee to the river. On the day of our inspection one of the pumps was dismantled. At present only a 50hp discharge pump exists. Originally two pumps were located at this site. The two pumps were installed 30 years ago. One pump was converted from diesel to electric 5 years ago. The second pump (diesel) was pulled in the 1982 San Joaquin River Flood. The remaining electric pump operates but is temporarily disconnected.

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 13, T3S, R6E (DWR# 3S/6E-13F)

Latitude/Longitude: Lat. 37° 40' 33"/Long. 121° 15' 46"

County: San Joaquin USGS Quad Map: Vernalis

WATER SOURCE

Type and source of water being discharged (description): This discharge is a pumped discharge composed of surface runoff during the rainy season and surface tailwater from irrigated fields during the irrigation season.

Comments on factors affecting water quality and quantity at the site: Discharge water likely comes from the 402 acres west of Lake Avenue (as shown on the map supplied by RD 2064). A field determination is needed to assess the significance of ponded water in this area and whether ponded water is discharged through this pump system.

Pump Meter#: 7T9121

SAN JOAQUIN RIVER

Section 17: Maze Road Bridge (Hwy.132) to Airport Way (Vernalis)

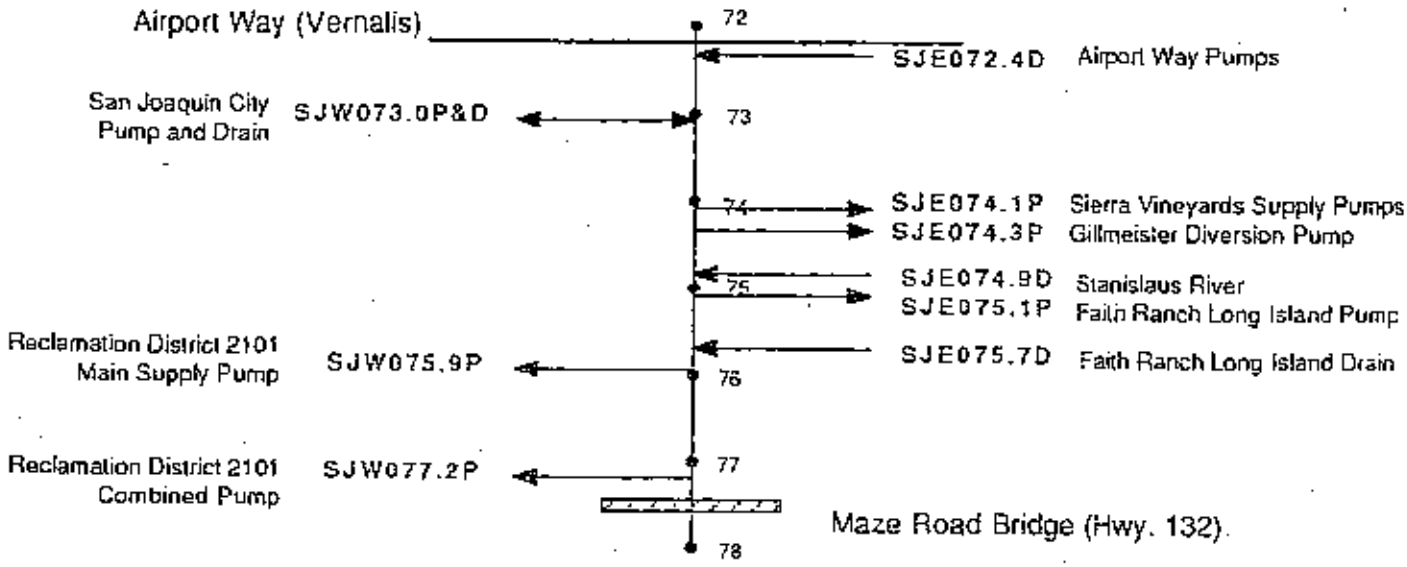


Figure A-17. Schematic Diagram for Water Diversions and Discharges on theSan Joaquin River from Maze Road Bridge (Hwy. 132) to Airport Way (Vernalis) (River Section 17).

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJE 072.4D

Site Name: Airport Way Pumps River Mileage: 72.4

Site description, location and access: Two surface water discharge pumps are located on the east bank of the San Joaquin River approximately 400 feet south of Airport Way. The pumps are on the landward side of the levee with 15"+ diameter discharge lines through the levee to the river. On the day of our inspection one of the pumps was dismantled. At present only a 50hp discharge pump exists. Originally two pumps were located at this site. The two pumps were installed 30 years ago. One pump was converted from diesel to electric 5 years ago. The second pump (diesel) was pulled in the 1982 San Joaquin River Flood. The remaining electric pump operates but is temporarily disconnected.

Township/Range/Section: SW 1/4, SE 1/4, NW 1/4, Section 13, T3S, R6E (DWR# 3S/6E-13F)

Latitude/Longitude: Lat. 37° 40' 33"/Long. 121° 15' 46"

County: San Joaquin USGS Quad Map: Vernalis

WATER SOURCE

Type and source of water being discharged (description): This discharge is a pumped discharge composed of surface runoff during the rainy season and surface tailwater from irrigated fields during the irrigation season.

Comments on factors affecting water quality and quantity at the site: Discharge water likely comes from the 402 acres west of Lake Avenue (as shown on the map supplied by RD 2064). A field determination is needed to assess the significance of ponded water in this area and whether ponded water is discharged through this pump system.

Pump Meter#: 7T9121

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# SJW 073.0D

Site Name: San Joaquin City Drain River Mileage: 73.0

Site description, location and access: The actual site is a man made ditch which is used for allowing San Joaquin River water to flow westward to a diversion pump. The diversion pump is used to irrigate land upslope (west of Kasson Road). There are three discharges into this man made ditch. At times of pumping, these discharges are recycled with the irrigation water otherwise they flow or seep to the San Joaquin River. The site is located 300 feet east of Kasson Road, 0.5 miles south of Durham Ferry Road.

Township/Range/Section: SW 1/4, SE 1/4, SW 1/4, Section 13, T3S, R6E (DWR# 3S/6E-13P)

Latitude/Longitude: Lat. 37° 40' 08"/Long. 121° 15' 43"

County: San Joaquin USGS Quad Map: Vernalis

WATER SOURCE

Type and source of water being discharged (description): The three discharges are:

a. Greenwood Road Drain; the Greenwood Road Drain carries both tile drainage and surface tailwater. The total drainage area supplying the Greenwood Drain is approximately 1620 acres. The area is bound on the west by the West Stanislaus Irrigation District Lateral 4 North at Vernalis, and on the east by McCracken Road and Greenwood Road (see map 1a). The tile drainage that enters this system comes from the McCracken Road Drain (see map 1b). The McCracken Road Drain was installed in 1967 to drain a 250 acre orchard on the west side of McCracken Road. The Greenwood Avenue Drain also picks up high ground water. The Greenwood Avenue Drain flows under Kasson Road and discharges to a Slough which either flows to the man-made diversion ditch at Mile 73.0 or seeps to the river. The Greenwood Road Drain is monitored at Kasson Road as Site# SJC012. There is a small drainage area of 190 acres in between the Greenwood Road drainage area and Kasson Road (see map 1a). This area drains into the same slough as the Greenwood Road Drain.

   The sources for irrigation water to the Greenwood Road drainage area are the West Stanislaus Irrigation District Lateral 4 North and on-farm irrigation wells. The small drainage area east of the Greenwood Road drainage area appears to receive water from irrigation wells and possibly from the San Joaquin River via a diversion pump (SJW073.0P).

b. Yasui Ranch Surface Drain; This drain carries both tile drain water and surface tailwater. Much of the runoff in the drain is recaptured in tailwater return systems upslope. The flow that does manage to cross Kasson Road flows to the man-made diversion ditch at Mile 73.0

or seeps to the river. The tile drainage comes from about 400-500 acres upslope and to the east of West Stanislaus Irrigation District.

Surface tailwater comes from approximately 900 acres south of Durham Ferry Road (see map 2a). The site is monitored as Site# SJC030. The sources of irrigation water to this drainage area are on-farm irrigation wells, recaptured tailwater systems, and from the West Stanislaus Irrigation District Lateral 4 North.

c. RD 2101 Main Drain (Coddington Drain); The RD 2101 Main Drain carries only surface return flows (tailwater) and operational spill water from Blewett Reclamation District No. 2101. The drainage area consists of 1420 acres of irrigated land (see map 3a). The area is bound by Highway 132 on the south, McCracken Road on the West, and Greenwood Road on the north. This discharge is through levee (gravity) in low river flow periods and by pumping at other times. The discharge is into the same slough that the Greenwood Road drain discharges into. This slough either flows to the man-made diversion ditch at Mile 73.0 or seeps into the river. This discharge is 1000 feet south of the Greenwood Road discharge. This site is monitored as Site# SJC018. The source of irrigation water to the drainage area on the east side of Kasson Road are two San Joaquin River diversion pumps operated by the Blewett Reclamation District No. 2101. The area on the west side of Kasson Road receives its supply water from the West Stanislaus Irrigation District.

Comments on factors affecting water quality and quantity at the site: The source of water for each discharge will vary. The quality will depend upon the amount of surface water, tile drainage water and other inputs. A significant source may be the numerous wells in the area that supply water.

MONITORING

Previous or ongoing monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 027 STC 030 STC 018	Ca, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, & Suspended Sediments	monthly when flowing	8/86-present	CVRWQCB Files

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJW 073.0 P

Site Name: San Joaquin City Pump River Mileage: 73:0

Site description, location and access: The diversion pump is 300 feet east of Kasson Road, 0.5 miles south of Durham Ferry Road. The diversion pump is located 1000 feet west of the San Joaquin River with a man-made ditch used to allow San Joaquin River water to flow westward to the pumps. Access to the site is via Kasson Road.

Township/Range/Section: SW 1/4, SE 1/4, SW 1/4, Section 13, T3S, R6E (DWR # 3S/6E-13P)

Latitude/Longitude: Lat. 37° 40' 08"/Long. 121° 15' 43"

County: San Joaquin USGS Quad Map: Vernalis

Type of diversion and use of the water: Pumped diversion for irrigation of 220 acres. Crops grown include alfalfa, sugar beets, barley, beans, and tomatoes.

Meter Number: 177T39 (PG&E)

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 074.1 P

Site Name: Sierra Vineyards Supply Pumps River Mileage: 74.1

Site description, location and access: There are 2 diversion pumps at this site; each feeding into a combined supply system. Site is noted by an extensive protection barrier on the upstream side. Site is located on the eastern levee, 0.5 miles north along the levee road from its junction with Two Rivers Road. Pumps are located within River Junction Reclamation District No. 2064.

Township/Range/Section: NW 1/4, SE 1/4, SW 1/4, Section 18, T3S, R7E (DWR # 3S/7E-18P)

Latitude/Longitude: Lat. 37° 40' 12"/Long. 121° 14' 43"

County: San Joaquin USGS Quad Map: Ripon, CA

Type of diversion and use of the water: San Joaquin River water diverted for irrigation use within Reclamation District No. 2064.

Meter Number: 2488T9 (PG&E)

Water Right Permit Number: 4460 (River Junction Reclamation District)
c/o Stanley Mortensen, Secretary
1002 Pine Street
Manteca, CA 95336
(209) 823-3480

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 074.3 P

Site Name: Gillmeister Diversion Pump River Mileage: 74.3

Site description, location and access: Single 50hp diversion pump located on the eastern levee 100 ft south of the levee intersection with Two Rivers Road. Pump (8000 gpm rating) is located within the River Junction Reclamation District No. 2064. Actual diversion site is located off the main channel in a side slough of Sturgeon Bend

Township/Range/Section: NE 1/4, NE 1/4, SW 1/4, Section 18, T3S, R7E (DWR # 3S/7E-18L)

Latitude/Longitude: Lat. 37° 40' 22"/Long. 121° 14' 30"

County: San Joaquin USGS Quad Map: Ripon, CA

Type of diversion and use of the water: San Joaquin River water diverted for irrigation of 165 acres within the River Junction Reclamation District No. 2064. Crops grown include pears, beans, corn, and oats. Diversion channel is dug up to the pumps and is often turbid in appearance. Should be checked for discharges.

Meter Number: T63144 (PG&E)

Water Right Permit Number: 4460 (River Junction Reclamation District)
c/o Stanley Mortensen, Secretary
1002 Pine Street
Manteca, CA 95336
(209) 823-3480

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID # SJE 074.9D

Site Name: Stanislaus River River Mileage: 74.9

Site description, location and access: The Stanislaus River discharges into the San Joaquin River at mile 74.9. Access to the site is by boat.

Township/Range/Section: NW 1/4, NW 1/4, NE 1/4, Section 19, T3S, R7E (DWR # 3S/7E-19B)

Latitude/Longitude: Lat. 37° 39' 54"/Long. 121° 14' 26"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): Natural stream flow from the Sierra Mountains.

Comments on factors affecting water quality and quantity at the site: Discharges to the Stanislaus River and diversions from the river are likely to affect water quality and quantity at this site.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJE 075.1 P

Site Name: Faith Ranch Long Island Pump River Mileage: 75.1

Site description, location and access: Single pump located on the San Joaquin River at mile 75.1. Pump serves water to 70 acres of land on the river side of the levee. Access to the pump is via farm roads on the river side of the levee. Access is difficult in the wet season. This pump is located outside the boundaries of Reclamation District No. 2031. The pump is a 50hp pump.

Township/Range/Section: NW 1/4, SW 1/4, NE 1/4, Section 19, T3S, R7E (DWR # 3S/7E-19G)

Latitude/Longitude: Lat. 37° 39' 41"/Long. 121° 14' 19"

County: Stanislaus USGS Quad Map: Ripon, CA

Type of diversion and use of the water: San Joaquin River water diverted for irrigation use within lands immediately adjacent to the river. The irrigated area is 70 acres of irrigated pasture which is farmed most every year.

Meter Number: Z11629 (Modesto Irrigation District)

Water Right Permit Number: not found

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID # SJE 075.7D

Site Name: Faith Ranch Long Island Drain River Mileage: 75.7

Site description, location and access: This drain carries tailwater from approximately 70 acres of irrigation pasture on the river side of the levee. This drain carries tailwater from lands irrigated by Faith Ranch Long Island Pump (located at SJE 075.1P). Access to the drain is via farm roads on the river side of the levee. This drain is located outside the boundaries of Reclamation District No. 2031.

Township/Range/Section: NE 1/4, SW 1/4, SE 1/4, Section 19, T3S, R7E (DWR # 3S/7E-19Q)

Latitude/Longitude: Lat. 37° 39' 15"/Long. 121° 14' 09"

County: Stanislaus USGS Quad Map: Ripon, CA

WATER SOURCE

Type and source of water being discharged (description): Tailwater from irrigation of 70 acres of pasture and forage. Discharge is by gravity flow via a pipe under the access road adjacent to the river.

Comments on factors affecting water quality and quantity at the site: Discharge quality should reflect the quality of water diverted from the San Joaquin River for irrigation.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID # SJW 075.9 P

Site Name: RD 2101 Main Supply Pump River Mileage: 75.9

Site description, location and access: River diversion pump for Blewett Reclamation District No. 2101 which serves as a main supply pump for the district. Water is pumped into a concrete lined ditch which runs parallel north and south to the levee. Access to the site is via the river levee off of Maze Road. Site is located 1.2 miles north of Maze Road along the levee.

Township/Range/Section: NE 1/4, NE 1/4, NE 1/4, Section 30, T3S, R7E (DWR # 3S/7E-30A)

Latitude/Longitude: Lat. 37° 39' 08"/Long. 121° 13' 59"

County: Stanislaus USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion of San Joaquin River water. Irrigation is the intended use within Blewett Reclamation District No. 2101.

Meter Number: T92019

Water Right Permit Number: 1195 (Blewett Mutual Water Co., et al., Coddington, Phillip K. et al., McCombs, W. Wayne et al.)

License Number: 4934

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# SJW 077.2 P

Site Name: RD 2101 Combined Pump River Mileage: 77.2

Site description, location and access: The diversion pump consists of three pumps which feed into a main supply canal that runs parallel to and on the north side of Maze Road. This pumping station serves as source water for RD 2101 and other upslope water users. Access to the site is 250 north of Maze Road via levee road.

Township/Range/Section: SW 1/4, NW 1/4, SW 1/4, Section 29, T3S, R7E (DWR # 3S/7E-29M)

Latitude/Longitude: Lat. 37° 38' 32"/Long. 121° 13' 42"

County: Stanislaus USGS Quad Map: Ripon, CA

Type of diversion and use of the water: Pumped diversion of San Joaquin River water for irrigation use within RD 2101 and upslope lands.

Meter Number: 2T4071 (PG&E)

San Joaquin River Section #18

Airport Way (Vernalis) to Upstream of Banta-Carbona Intake Canal

SAN JOAQUIN RIVER

Section 18: Airport Way (Vernalis) to Upstream of Banta-Carbona Intake Canal

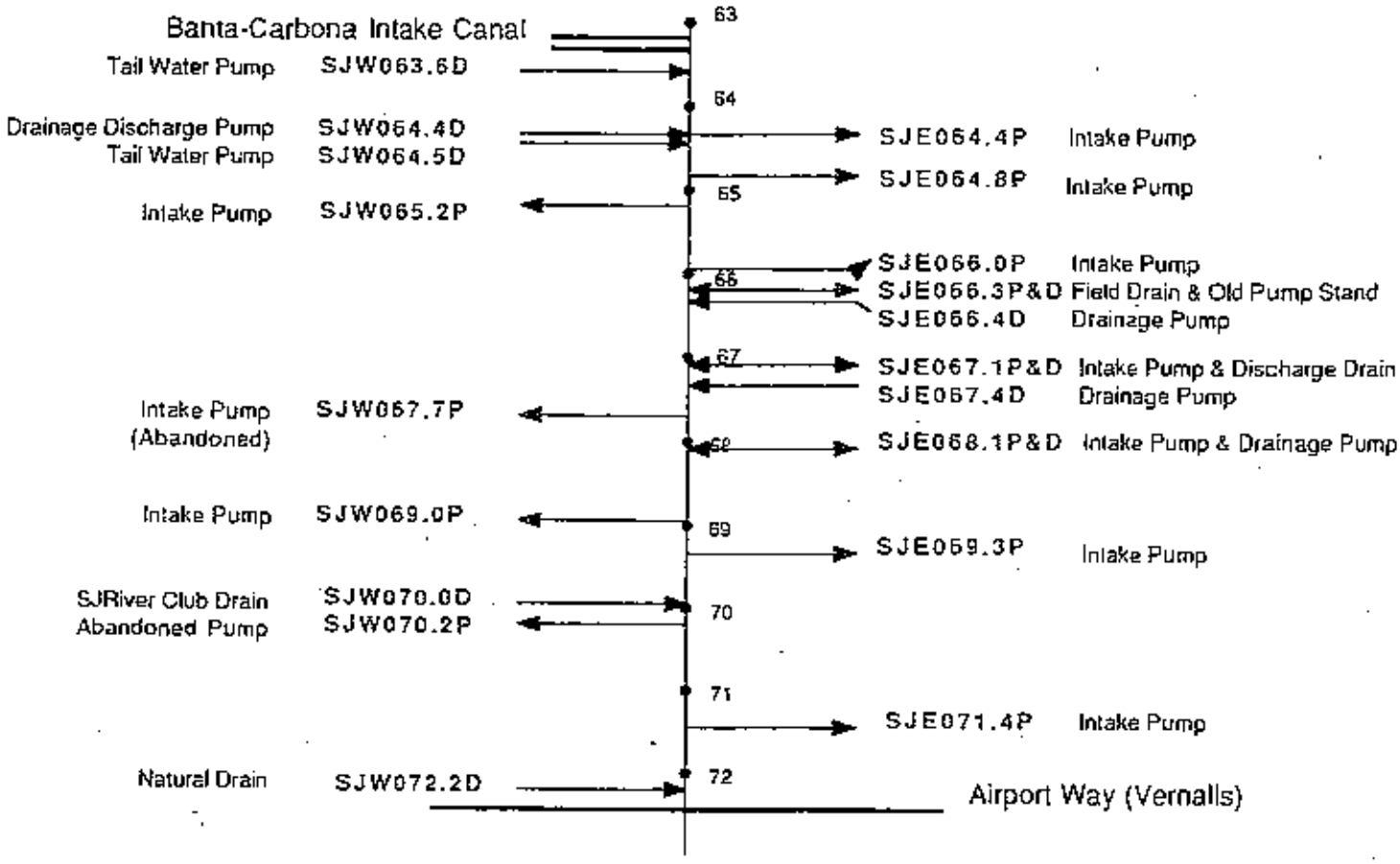


Figure A-18. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Airport Way (Vernalis) to Upstream of Banta-Carbona Intake Canal (River Section 18).

San Joaquin River Section #19

Banta-Carbona Intake to Paradise Dam

SAN JOAQUIN RIVER

Section 19: Banta-Carbona Intake Canal to Paradise Dam

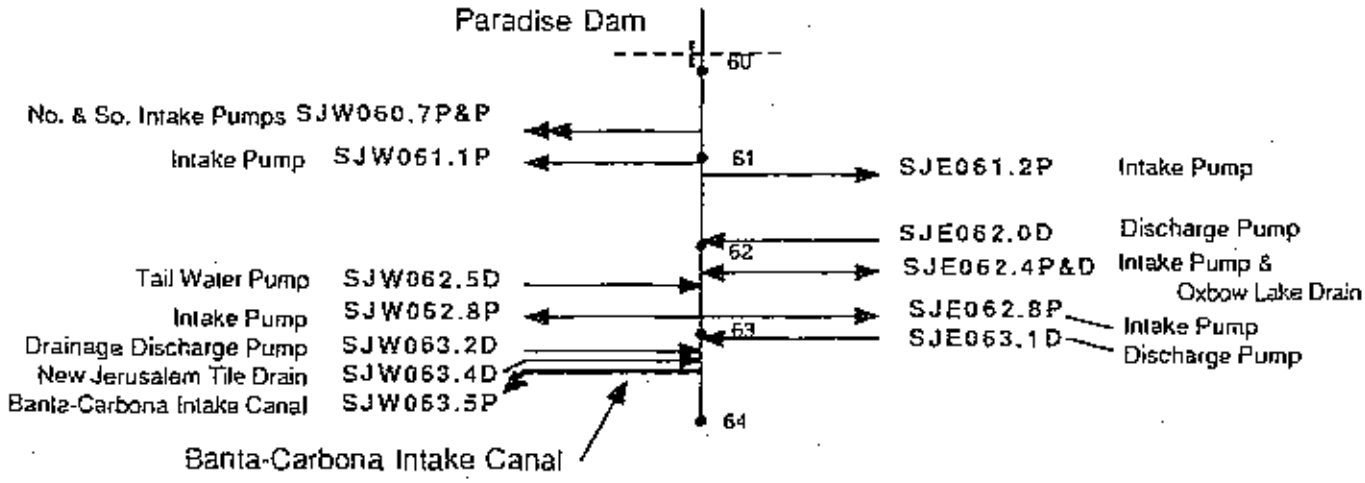


Figure A-19. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Banta-Carbona Intake Canal to Paradise Dam (River Section 19).

San Joaquin River Section #20

Paradise Dam to Mossdale Bridge (Interstate 5)

SAN JOAQUIN RIVER

Section 20: Paradise Dam to Mossdale Bridge (Interstate 5)

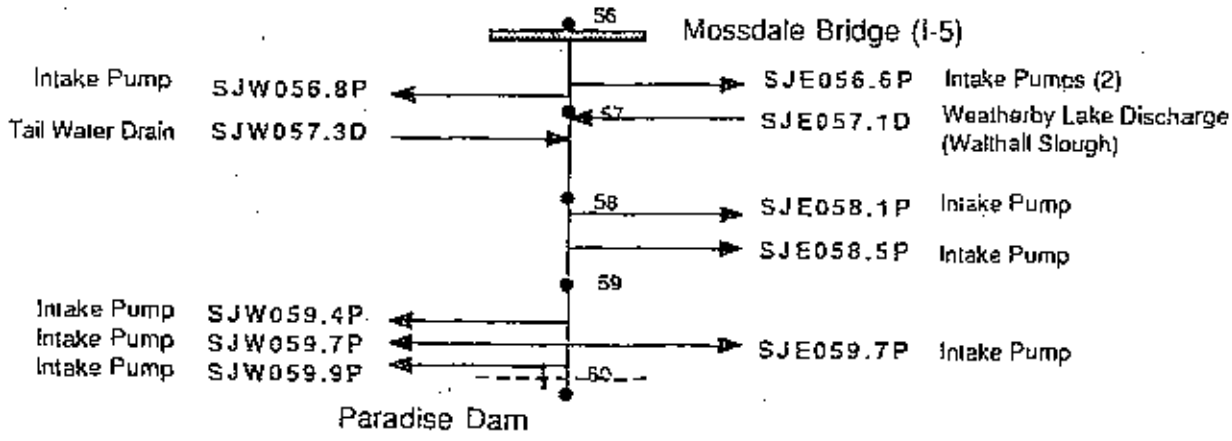


Figure A-20. Schematic Diagram for Water Diversions and Discharges on the San Joaquin River from Paradise Dam to Mossdale Bridge (Interstate 5) (River Section 20).

San Joaquin River Section A

Bear Creek-Eastside Bypass (Inflow) to San Joaquin River

Special Channel Survey A: Bear Creek from Eastside Bypass Inflow to San Joaquin River

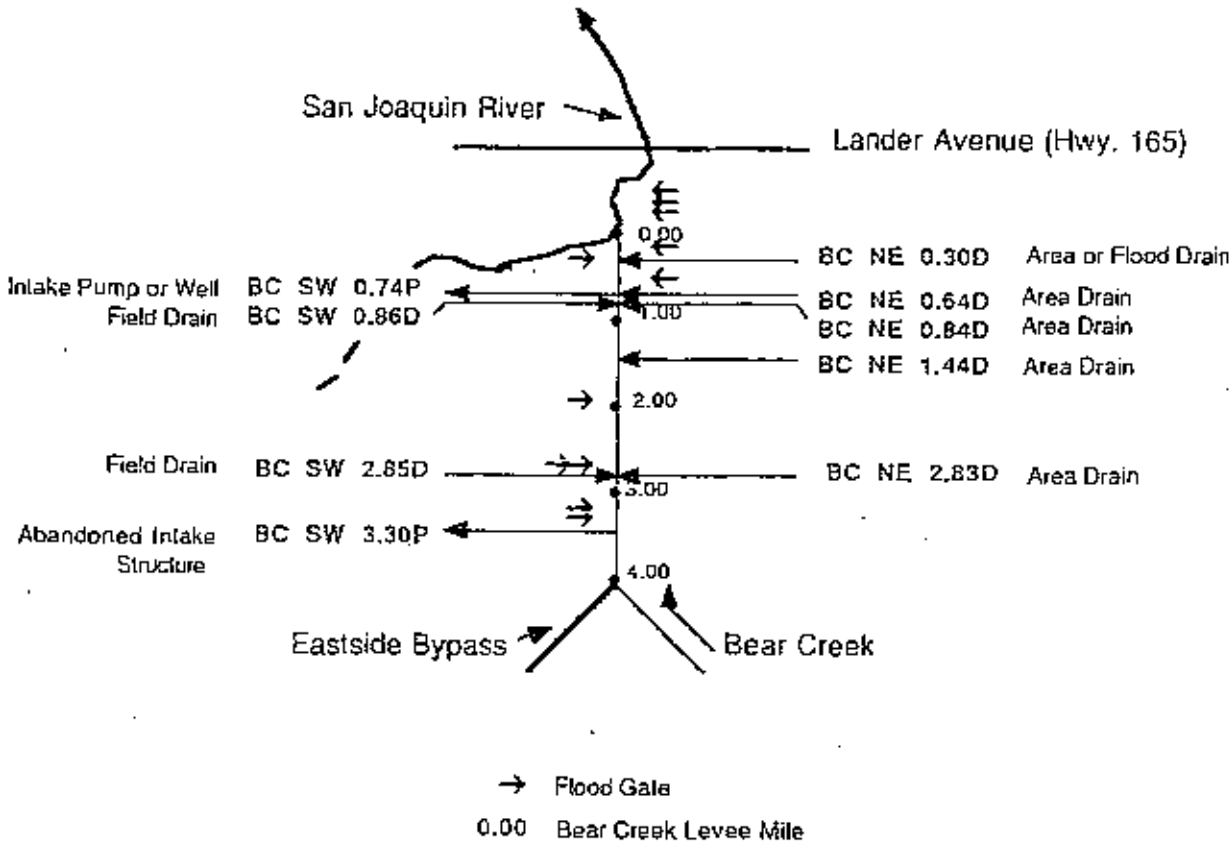


Figure A-21. Schematic Diagram for Special Channel Survey A: Bear Creek from Eastside Bypass Inflow to San Joaquin River.

San Joaquin River Section B

Old Grayson Channel-Origin to San Joaquin River

Special Channel Survey B: Old Grayson Channel from Origin to San Joaquin River

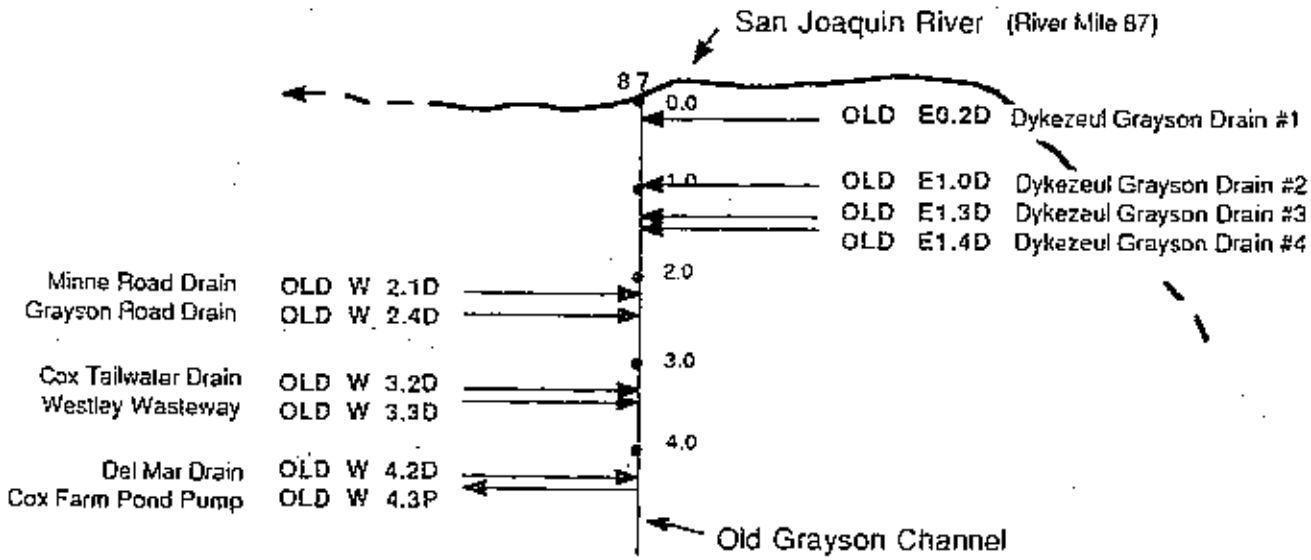


Figure A-22. Schematic Diagram for Special Channel Survey B: Old Grayson Channel from Origin to San Joaquin River.

SAN JOAQUIN RIVER DIVERSION SITE

SITE ID# OLD W 4.3P

Site Name: Cox Farm Pond Pump River Mileage: 4.3

Site description, location and access: The pump is located on a farm pond near the Old Grayson Channel. The site is accessed via Cox Road south from Grayson. Turn east off of Cox Road onto dirt farm road 0.3 miles south of Westley Wasteway. There is a Del Mar packaging facility on west side of road. Follow this dirt road. It turns south at the old dairy barn and the pump is located approximately 0.2 miles south of the barn.

Township/Range/Section: NE 1/4, SW 1/4, SW 1/4, Section 25, T4S, R7E (DWR# 4S/7E-25N)

Latitude/Longitude: Lat. 37° 33' 15"/Long. 121° 09' 18"

County: Stanislaus USGS Quad Map: Westley

Type of diversion and use of the water: 30hp pump with 3000 gal/min capacity. The pump is located on a pond and this pond is replenished during the irrigation season by West Stanislaus Irrigation District drainage water and seepage from the San Joaquin River and the Old Grayson Channel.

Meter Number: not recorded

Water Right Permit Number: not listed

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD W 4.2D

Site Name: Del Mar Drain Old Channel River Mileage: 4.2

Site description, location and access: The Del Mar Drain is so named as there are no other landmarks in the area. The drain is named after the food processing and packing/distribution facility that sits on Cox Road at the turn off to the site. The site is located 0.35 miles east of Cox Road. The turn off from Cox Road is 0.3 miles south of the Westley Wasteway. The access road is a private farm road and the discharge site is in a pasture area on the north side of a mobile home (approximately 1,000 feet north). Site is operated/maintained by West Stanislaus Irrigation District.

Township/Range/Section: NE 1/4, NE 1/4, SE 1/4, Section 26, T4S, R7E (DWR# 4S/7E-26J)

Latitude/Longitude: Lat. 37° 33' 23"/Long. 121° 09' 30"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): For all practical purposes, the flow in this drain is all tail water from irrigated fields upslope in the West Stanislaus Irrigation District. This drainage area is approximately 1,050 acres in size. It is bounded on the north by the Westley Wasteway, and on the west by the West Stanislaus Irrigation District Lateral 3 Sough (see map 1a). This site is monitored as Site# STC028. The sources of irrigation water to this drainage area are the West Stanislaus Irrigation District Laterals 2 and 3 South, and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: Water quality at the site will be influenced by the quality of the tail water entering the drain. A small amount of seepage probably enters the system during certain high ground water periods but its influence on water quality is likely to be small.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 028	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, and Suspended Sediments.	Monthly	4/86-Present	CVRWQCB Files
West Stanislaus Irrigation District	Del Mar Drain	EC, Suspended Sediments.	Monthly (May-Sept)	4/86-Present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD W 3.3D

Site Name: Westley Wasteway Old Channel River Mileage: 3.3

Site description, location and access: The wastewater discharges into the Old Grayson Channel from the west bank. The discharge point at the Old Grayson Channel is not accessible by road. The Westely Wasteway is located south of and runs parallel to Grayson Road. Cox Road, south out of Grayson, corsses the Wasteway 0.6 miles south of Grayson. This is probably the best access.

Township/Range/Section: SE 1/4, SW 1/4, NE 1/4, Section 26, T4S, R7E (DWR# 4S/7E-26G)

Latitude/Longitude: Lat. 37° 33' 37"/Long. 121° 09' 51"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): The water source is operational spill water from the Delta Mendota Canal and tail water from the West Stanislaus Irrigation District. No known tile drainage enters this drain. The area of drainage to the wasteway is approximately 3,280 acres (see map 1a). This site is monitored as Site# STC029. The sources of irrigation water to this drainage area are the Delta Mendota Canal, the West Stanislaus Irrigation District Laterals 2, 3, 4, 5, and 6 South, and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: The water quality will depend on the amount of tail water being discharged. The operational spill water should not affect water quality.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 029	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, & Suspended Sediments.	Monthly	6/86-Present	CVRWQCB Files
West Stanislaus RCD	#42	EC, temperature	Monthly (May-Sept)	6/79-Present	WSRCD Files
West Stanislaus Irrigation District	Westley Wasteway	EC, Suspended Sediment and Flow.	Monthly	4/86-Present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD W 3.2D

Site Name: Cox Tail Water Drain Old Channel River Mileage: 3.2

Site description, location and access: This drain is an irrigation tail water drain. The discharge site is located approximately 50 yards north of the Westley Wasteway. Access is via dirt road along north bank of the Westley Wasteway east of Cox Road. The drain is at the end of the irrigated field on north side of the Wasteway.

Township/Range/Section: SW 1/4, SW 1/4, NE 1/4, Sec. 26, T4S, R7E (DWR# 4X/7E-26G)

Latitude/Longitude: Lat. 37° 33' 33"/Long. 121° 09' 57"

County: Stanislaus USGS Quad Map: Westley, CA

WATER SOURCE

Type and source of water being discharged (description): Irrigation tail water from approximately 160 acres. The water source is from West Stanislaus Irrigation District Lateral 2 south.

Comments on factors affecting water quality and quantity at the site: The drainage water is expected to have a high sediment load.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD W 2.4D

Site Name: Grayson Road Drain Old Channel River Mileage: 2.4

Site description, location and access: Sampling point is at the Grayson Road Bridge as it corsses the old river channel (0.15 miles west of the intersection of Grayson Road and Cox Road). Discharge is from a pipe in the west bank of the old channel approximately 20 feet south of the bridge. This closed pipeline collection system is owned and operated by the West Stanislaus Irrigation District.

Township/Range/Section: NW 1/4, SW 1/4, NW 1/4, Section 26, T4S, R7E (DWR# 4S/7E-26E)

Latitude/Longitude: Lat. 37° 33' 43"/Long. 121° 10' 27"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): All the water entering this closed pipeline is tail water from the West Stanislaus Irrigation District. During periods of no flow, some seepage does enter the pipeline due tohigh ground water in the area, but the flow is small compared to the total discharge volume. This drain receives drainage water from approximately 2590 acres (see map 1a). This site is monitored as Site# STC030. The sources of irrigation water are the West Stanislaus Irrigation District laterals 2, 3, 4, 5, and 6 Sough and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: Water quality will be heavily influenced by the amount of tail water entering the system.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 030	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, & Suspended Sediments.	Monthly	10/85-Present	CVRWQCB Files
West Stanislaus RCD	#43	EC, temperature	Monthly (May-Sept)	7/78-Present	WSRCD Files
West Stanislaus Irrigation District	STC 030	EC, Suspended Sediment and Flow.	Monthly (May-Sept)	4/86-Present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD W 2.1D

Site Name: Minnie Road Drain Old Channel River Mileage: 2.1

Site description, location and access: Tail water drain that discharges at the eastern end of Minnie Road just north of the town of Grayson. Minnie Road is located 0.45 miles north of Grayson Road. The discharge site is on the right side of Minnie Road approximately 100 feet beyond the last mobile home. Access to the site is through a locked gate at the end of Minnie Road (approximately 0.3 miles east of River Road).

Township/Range/Section: SE 1/4, SE 1/4, SE 1/4, Section 22, T4S, R7E (DWR# 4S/7E-22R)

Latitude/Longitude: Lat. 37° 33' 59"/Long. 121° 10' 35"

County: Stanislaus USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): All the water entering this drain is from the West Stanislaus Irrigation District and consists of only tail water from approximately 1250 acres of irrigated fields (see map 1a). No tile drainage systems are known to exist in this drainage area. During periods of no flow, there does not appear to be high ground water seepage into this system. This site is monitored as Site# STC031. The sources of irrigation water to this drainage area are the West Stanislaus Irrigation District Laterals 2, 3, and 4 Sough and on-farm irrigation wells (see map 1b).

Comments on factors affecting water quality and quantity at the site: Water quality will be influenced by the quality of the tail water.

MONITORING

Previous or on-going monitoring at the site:

Agency	Site ID#	Constituents	Frequency	Period of Record	Data Storage
CVRWQCB	STC 031	Cl, SO_4, Total Alkalinity, EC, B, Cu, Cr, Pb, Hg, Mo, Ni, Zn, Se, and Suspended Sediments.	Monthly	10/85-Present	CVRWQCB Files
West Stanislaus Irrigation District	STC 031	EC, Suspended Sediment and Flow.	Monthly (May-Sept)	4/86-Present	WSID Files

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD E 1.4D

Site Name: Dykezeul Grayson Channel Drain No. 4 River Mileage: 1.4

Site description, location and access: The field drain is located on the east bank of the Old Grayson Channel approximately 1.4 miles upstream from its confluence with the present river channel through Laird Slough. The drain has a concrete lining where the corrugated pipe emerges from under the levee road. The site is accessed via the levee road on the east side of the old Grayson channel. The levee road is located on the north side of Grayson Road approximately 0.4 miles east of the Grayson Road Bridge over the former San Joaquin River channel near Grayson. The site is located approximately 0.7 miles north on the levee road.

Township/Range/Section: SE 1/4, NE 1/4, SW 1/4, Section 23, T4S, R7E (DWR# 4S/7E-23L)

Latitude/Longitude: Lat. 37° 34' 13"/Long. 121° 10' 06"

County: Stanislaus USGS QUAD MAP: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from the irrigation of silage corn and winter barley. Drains approximately 50 acres. The water source is from river pump (SJW 088.9P) or farm well. The drain is gravity.

Comments on factors affecting water quality and quantity at the site: Water quality will reflect supply water quality plus increased sediment content.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD E 1.30

Site Name: Dykezeul Grayson Channel Drain No. 3 — Old Channel River Mileage: 1.3

Site description, location and access: The field drain is located on the east bank of the Old Grayson channel approximately 1.3 miles upstream from its confluence with the present day San Joaquin River channel through Laird Slough. The field drain has a lift gate on the field side of the levee road and water is transported to the old channel through a corrugated pipe under the road. The site is accessed via the levee road on the east bank of the Old Grayson Channel. The levee road is located on the north side of Grayson Road 0.4 miles east of the Grayson Road Bridge over the old channel near Grayson. The site is located approximately 0.8 miles north on the levee road. Levee road is located 0.4 miles east of the Grayson Road Bridge over the old channel near Grayson.

Township/Range/Section: NE 1/4, SE 1/4, SW 1/4, Section 23, T4S, R7E (DWR# 4S/7E-23P)

Latitude/Longitude: Lat. 37° 37' 30"
Long. 121° 10' 01"

County: Stanislaus — USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from irrigation of corn (silage) corn and winter barley. Drains approximately 35 acres. The water source is from river pump (SJW 088.9P) or farm well. The drain is gravity.

Comments on factors affecting water quality and quantity at the site: Water quality will reflect the supply water quality plus increased sediment content.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD E 1.0D

Site Name: Dykezeul Grayson Channel Drain No. 2 — Old Channel River Mileage: 1.0

Site description, location and access: The field drain is on the east side of the old Grayson channel approximately 1 mile upstream of the confluence with the present day San Joaquin River Channel north of Laird Slough. Access to the channel is along the levee road of the old river channel. The levee road is located 0.4 miles east of the Grayson Road Bridge over the old channel near Grayson.

Township/Range/Section: NE 1/4, NW 1/4, SE 1/4, Section 23, T4S, R7E (DWR# 4S/7E-23K)

Latitude/Longitude: Lat. 37° 34' 22"/Long. 121° 09' 52"

County: Stanislaus — USGS Quad Map: Westley

WATER SOURCE

Type and source of water being discharged (description): Tail water drainage from irrigation of corn (silage) and winter barley. Drains approximately 9 acres. The water source is from a river pump (SJW 088.9P) or farm well. Drain is gravity.

Comments on factors affecting water quality and quantity at the site: Water quality will reflect the supply water quality plus increased sediment.

SAN JOAQUIN RIVER DISCHARGE SITE

SITE ID# OLD E 0.20

Site Name: Dykezeul Grayson Channel Drain No. 1

Old Channel River Mileage: 0.2

Site description, location and access: The field drain is on the east side of the old Grayson channel approximately 0.2 miles upstream of the confluence with the present day San Joaquin River Channel. The drain is a corrugated pipe with a flap gate. Access to the site is along the levee road of the Old Grayson Channel. The levee road is located 0.4 miles east of the Grayson Road Bridge over the old channel. Follow the levee road north as it follows then meanders of the old stream channel.

Township/Range/Section: SW 1/4, NW 1/4, NE 1/4, Section 23, T4S, R7E (DWR# 4S/7E-23B)

Latitude/Longitude: Lat. 37° 34' 41"/Long. 121° 09' 54"

County: Stanislaus

USGS Quad Map: Westley

WATER SOURCE

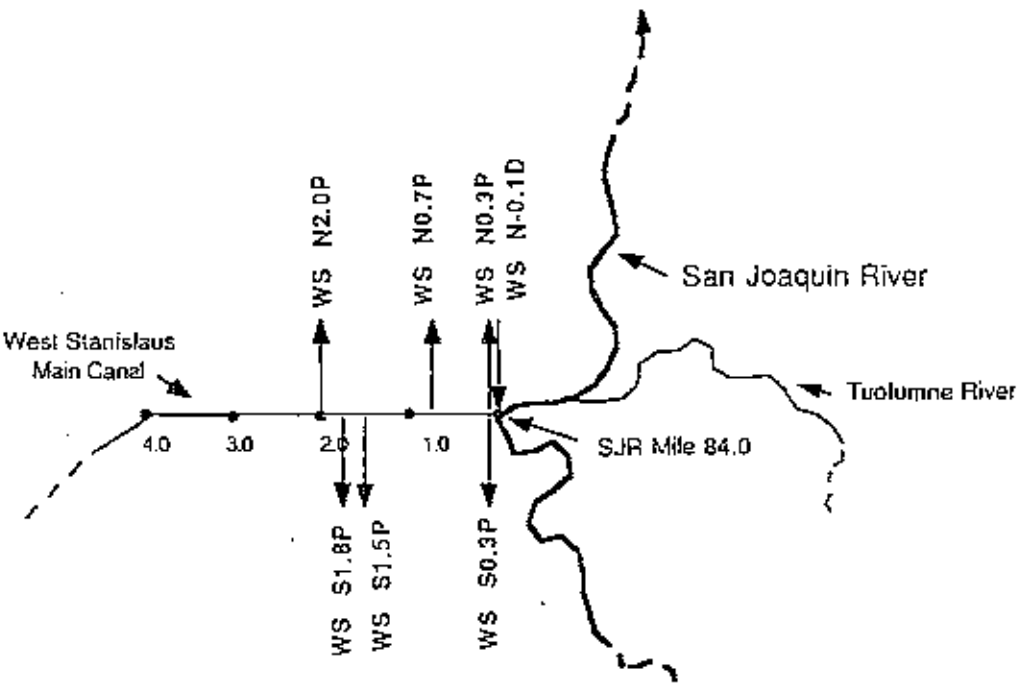
Type and source of water being discharged (description): Tail water drainage from irrigation of corn (silage) and winter barley. The area drained is approximately 100 acres. The water source is from a river pump (SJW 088.9P) or farm well. Drain is gravity.

Comments on factors affecting water quality and quantity at the site: Water quality will be affected by supply water quality but with increased sediment.

San Joaquin River Section C

West Stanislaus Irrigation District Pumps to San Joaquin River

Special Channel Survey C: West Stanislaus Irrigation District
Pumps to San Joaquin River



1.0 West Stanislaus Main Canal Mile

WS N-0.1D	Tail Water Discharge Pump	WS S0.3P	Diversion Pump
WS N0.3P	Diversion Pump	WS S1.5P	Diversion Pump
WS N0.7P	Diversion Pump	WS S1.8P	Diversion Pump
WS N2.0P	Diversion Pump		

Figure A-23. Schematic Diagram for Special Channel Survey C: West Stanislaus Irrigation District from Pumps to San Joaquin River.